ALABAMA DEPARTMENT OF ECONOMIC AND COMMUNITY AFFAIRS

LAND AND WATER CONSERVATION FUND

2002-2007

STATE COMPREHENSIVE OUTDOOR RECREATION PLAN

STATE OF ALABAMA
Department of Economic and Community Affairs

Bob Riley
Governor

John D. Harrison
Director

STATE COMPREHENSIVE OUTDOOR RECREATION PLAN
2002-2007

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INTRODUCTION

The Land and Water Conservation Fund (LWCF) is a visionary and bipartisan program, established by Congress in 1964 to create parks and open spaces, protect wilderness, wetlands, and refuges, preserve wildlife habitat, and enhance recreational opportunities.

From parks to playgrounds, wilderness to wetlands, bicycle paths to hiking trails, LWCF has helped communities acquire nearly seven million acres of parkland, water resources, and open space. LWCF has also underwritten the development of more than 37,000 state and local park and recreation projects. Authorized at $900 million annually, LWCF is one of the most important conservation tools ever designed.

A Vision That Endures

The need for a mechanism like the LWCF first became apparent in the 1950s, when a shortfall in federal funding threatened to limit protection for places where Americans could experience and enjoy the outdoors. In 1958, Congress – with the full support of President Dwight Eisenhower – created the Outdoor Recreation Resources Review Commission. Chaired by Laurence Rockefeller, the commission documented the increasing need Americans felt for quality and accessible outdoor recreation, as well as threats to the open space and natural resources most appropriate to provide that recreational experience. When the commission issued its report, *Outdoor Recreation for America*, in 1962, one of its chief recommendations was that Congress should establish a source of funding to safeguard important natural areas and provide outdoor recreation opportunities for all Americans. The Land and Water Conservation Fund was later proposed by President John Kennedy, in 1962. In a letter to Congress, he stated:

"Actions deferred are all too often opportunities lost, particularly in safeguarding our natural resources. I urge the enactment of this proposal at the earliest possible date so that a further significant step may be taken to assure the availability and accessibility of land and water-based recreation opportunities for all Americans."

Although Congress did not enact the Land and Water Conservation Fund while President Kennedy was alive, his letter sparked the bipartisan process that led to enactment of LWCF in 1964, under President Lyndon Johnson. The success of the Land and Water Conservation Fund's process of distributing money – and the popularity of the projects that LWCF has made a reality – created pressure to increase the amount of money in the LWCF. Congress in 1968 made offshore oil and gas drilling lease proceeds a source for LWCF, and in 1977 increased the amount of funds available to $900 million per year.

To ensure an integrated approach to conservation and recreation, the Land and Water Conservation Fund has a federal and state component:

> The federal program funds the purchase of land and water areas for conservation and recreation purposes within our nation's four federal land management agencies [Forest Service, Fish and Wildlife Service, National Park Service, and Bureau of Land Management] includes:
>
> - public acquisition of special lands and places for conservation and recreation purposes;
> - public acquisition of private holdings within national parks, national forests, national fish and wildlife refuges, public lands managed by the Bureau of Land Management, and wilderness areas;
> - public acquisition of areas key to fish and wildlife protection; and
> - public acquisition as authorized by law
>
> The state matching grant program provides funds to states for planning, developing, and acquiring land and water areas for state and local parks and recreation areas. Funds appropriated for LWCF's state matching grants program are divided among the states and territories and can be used to:
>
> - acquire land for parks and recreation purposes;
> - build or redevelop recreation and park facilities;
> - provide riding and hiking trails;
> - enhance recreation access; and,
> - conserve open space, wetlands, forests, estuaries, wildlife, and natural resource areas through recreation projects

Legal Authority

The Director of the Alabama Department of Economic and Community Affairs is designated as the State Liaison Officer by the Governor for the purpose of administering the LWCF in Alabama. Alabama's participation in the LWCF program is established by and pursuant to the Land and Water Conservation Act of 1965 (P.L. 95-625), as amended. With the passage of the Land and Water Conservation Fund Act of 1964 (P.L. 88-578; 78 Statute 897) funds were made available to the states for the "planning, acquisition and development of needed land and water areas and facilities." This law requires each state to prepare an acceptable comprehensive outdoor plan before acquisition and development projects are considered. This document and related appendices were prepared to be in compliance with Chapter 630 of the Federal *Land and Water Conservation Fund Grants Manual*. Federal acceptance of the State's comprehensive outdoor recreation planning process is a prerequisite for Alabama to participate in the LWCF Program.

Two other Acts require the state to engage in and maintain a SCORP. First, the Transportation Equity Act for the 21st Century which provides grant assistance to the states for acquisition, development and maintenance of motorized and non-motorized trail resources (P.L. 105-178) requires state trail projects to be in accord with the State Comprehensive Outdoor Recreation Plan. The last State Trail Plan was completed in 1973 and amended since then through the SCORP process. A complete revision to the Trails Plan is scheduled for 2005. Secondly, the Emergency Wetlands Resources Act of 1986 (P.L. 99-645) requires each state comprehensive outdoor recreation plan to include a component that identifies wetlands as a priority concern within the state. A chapter to this plan presents a brief history of wetland protection in Alabama, current wetland protection strategies, and a priority listing of regions/watersheds for wetland restoration/acquisition.

Organization

The Alabama Department of Economic and Community Affairs' Recreation Programs Section of the Director's Office is primarily responsible for comprehensive statewide recreation planning in Alabama. In addition to outdoor recreation planning, it is responsible for wetlands, trail, river, and open space planning. Other agencies that have internal recreation planning components affecting Alabama or are otherwise involved in the process through the Alabama Citizens Advisory Council for Recreation Resource Planning (RRPC) include:

Federal Agencies: U.S. Forest Service, National Park Service, Agricultural Extension Service, Tennessee Valley Authority, U.S. Army Corps of Engineers, U.S. Department of Commerce, and U.S. Department of Defense; Resource Conservation and Development Districts (RC&D's), Bureau of Land Management, and U. S. Fish and Wildlife Service;

State Departments: Alabama Health Department, Alabama Department of Mental Health, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, Alabama Forestry Commission, Alabama Historical Commission, State Colleges and Universities, and State Commissions and Authorities, and Alabama Bureau of Travel and Tourism;

Local Governments: Cities, towns, recreation authorities and counties; and

Private Sector Organizations and Individuals: YMCA, Boy Scouts of America, campground owners, tourist associations, Alabama Recreation and Parks Association, Alabama Wildlife Federation, The Nature Conservancy; Sierra Club, Alabama Power Company, and non affiliated citizens throughout the state.

State Planning Guidelines and Assumptions

The following state guidelines, policies, and/or assumptions form the foundation for this plan and its implementing strategies.

1. Parks, recreation, open space, and maintenance of the State's natural diversity are essential to the health, general welfare, comfort, and well being of the citizens of Alabama and its visitors.
2. All levels of government should contribute toward meeting the public need for outdoor recreation in Alabama.
3. Private businesses and individuals are encouraged to provide recreational services and facilities where economically feasible. The State will not participate, directly or indirectly, in the development of recreational facilities that adversely affect similar private sector operations that are meeting existing demand.
4. It is important to the continued economic growth of Alabama to promote, protect and enhance the quality of the state's recreation resource base: including its special natural areas, developed park facilities, historic and archaeological resources, unique geological features, wetlands and other significant water based resources.
5. Although State residents should be given major consideration in planning for recreation, the recreational needs of nonresidents must also be considered.
6. State coordination of recreation resource base planning, development and management activities is necessary to effectively address recreational needs and avoid duplication.
7. Citizen participation in the recreation resource and facility development planning processes is necessary at all levels of government.
8. Recreation needs of handicapped citizens shall be assessed and addressed in program and facility development planning processes.
9. Conservation of Alabama's natural resources and development of a conservation ethic is necessary to ensure that the quality of the natural resource base will be preserved for future generations.
10. Multiple uses of the State's land and water resources are required to meet the diverse recreational and economic needs and expectations of state residents and visitors.
11. Parks and recreation facilities play a vital role in promoting tourism and economic development in the State.
12. Protection of Alabama's natural resource base (lands, waters, wetlands, and habitat types) is critical for the continued growth and development of the State and maintenance of a diverse environment on which all life depends.

The operational goals of ADECA's Recreation Programs Section with respect to recreation programs administered by the section include:

1. To adhere to the provisions of this Plan in administering the Land and Water Conservation Fund and Recreational Trails Program.
2. To maintain a continuing planning process so the State Comprehensive Outdoor Recreation Plan remains current and reflects priority concerns.
3. To provide a feasible course of action to attain the State of Alabama's outdoor recreation goals.
4. To provide leadership and facilitate planning coordination between all governmental units and agencies and the private sector in order to ensure compatibility with this plan and to meet the existing and projected park and recreation needs of Alabama residents and visitors.
5. To give priority in the use of Land and Water Conservation Funds and the Recreational Trails Funds to the needs identified in this Plan.
6. To monitor the status and condition of the recreation resource base, keep the governor and legislature informed of changes which may adversely affect resource quantity or quality; and, through a program of research, expand the knowledge available to public and private sector natural and recreational resource managers.

7. To adhere to federal government policies, insofar as possible, in implementing outdoor recreation programs when federal assistance is involved.
8. To encourage legislation providing more and better public outdoor recreation, consistent with the Plan's priorities.
9. To provide technical assistance to governmental agencies and private sector organizations in recreation resource management and development.

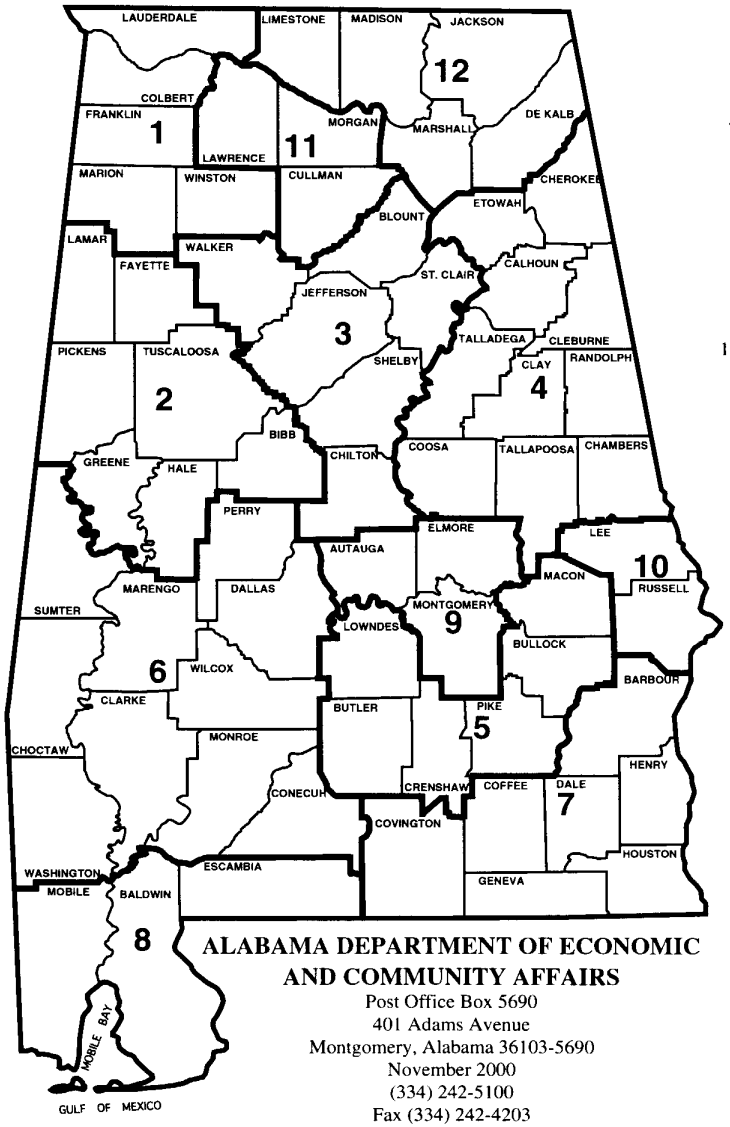
Organization for Recreation Planning

To meet outdoor recreation needs and ensure efficient, responsible use of recreation resources, organized planning is necessary. To be successful, plans must consider the social, economic, and political aspects of recreation, be compatible with our natural resource environment, make efficient use of funds available for recreation, and consider all geographic parts of the state.

The planning units used to prepare Alabama's Statewide Comprehensive Outdoor Recreation Plan are Alabama's 12 official planning and development districts (see Figure 1-1). These districts segment the state into smaller, more manageable planning units. Although the boundaries are not perfect, the districts represent distinct segments of the state's resources and people. Recreation data is collected, analyzed and reported on this basis.

Figure 1-1 Regional Planning and Development Districts

State of Alabama
Governor Don Siegelman
Regional Councils



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3. Birmingham Regional Planning Commission
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CHAPTER I
RECREATION GOALS AND OBJECTIVES

Alabama's Recreation Assessment and Policy Plan include goals and objectives that have been identified by the Recreation Resource Planning Council; Federal, state, and local officials and employees; and the public. The inclusion of goals and objectives in the plan serves to focus governmental and private sector attention on important issues, the completion of which will affect the quantity, quality, and/or distribution of outdoor recreation resources within Alabama. Several major accomplishments resulting from the SCORP process are summarized below.

Notable Achievements 1990-2000

Goal 1-1 Create a permanent program for the purpose of acquiring or protecting significant land and water resources for use as parks, natural and wildlife management areas.
The Forever Wild Land Trust was created in 1992 to purchase and manage unique lands within Alabama, thereby securing property for public use that will be maintained as 'forever wild'. Funding for the program comes from a percentage of the interest earned from state royalties on offshore gas and oil leases. These funds began accumulating during fiscal years 1992 and 1993 and the first purchase occurred in 1994. Fifteen percent of the appraised value for each acquired tract is set aside in a stewardship account that provides funding for on site management. The program will continue through fiscal year 2012.

The State Lands Division of the Alabama Department of Conservation and Natural Resources administers the Forever Wild Program. The lands acquired through the Forever Wild Program target four areas that secure property for the most common groups of outdoor interests: nature preserves, recreation areas, state parks, and wildlife management areas. Any person donating property to the State for the purposes of the Forever Wild program shall receive twice the ordinary deduction for state income tax purposes for the taxable year in which the property or interest is donated. Provided the value of any such property or interest therein, subject to the double deduction, is limited to the actual value of the property.

Goal 1-2 Develop less costly alternatives to fee simple state land acquisition.
In 1997, the Alabama Legislature passed Act 97-715 specifying the parameters for nonpossessory interests (Conservation Easements). Conservation easements may be acquired for the purposes of retaining or protecting natural, scenic, or open space values of real property, ensuring its availability for agricultural, silvicultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological, paleontological, or cultural aspects of real property. Conservation easements are available to governmental bodies, charitable associations, or charitable trusts such as a land trust. The largest conservation easement was donated in 2003, when Campbell B. Lanier III sought to ensure that the vast array of natural resources on his Sehoy Plantation, located on the edge of Alabama's Black Belt, would remain intact by granting a perpetual conservation easement to the Alabama Forest Resources Center (AFRC) on 10,517 acres of his more than 13,000 acre quail plantation near Hurtsboro, Alabama.

Furthermore, the Act allows the same tax benefits to property owners that donate all or part of their property interest to an eligible governmental entity as those afforded to donations under the Forever Wild Program discussed above. In order to qualify for tax benefits, a conservation easement must meet the criteria established by the Internal Revenue Service as a "qualified conservation contribution". First, the easement must be perpetual; meaning the conservation purpose will be up-held permanently. Secondly, a qualified conservation organization, as outlined in Act No. 97-715 of the Code of Alabama, must hold the easement. This would be a government entity or a charitable conservation organization. Third, the easement must serve the purposes outlined in Act No. 97-715 of the Code of Alabama.

This goal has been accomplished, in part, by ADECA assisting local governments to take advantage of the Federal Lands to Parks Program which allows state and local units of government to acquire federal surplus property for outdoor recreation purposes without cost. ADECA's Recreation Programs Section is working with the National Park Service through the Federal Lands to Parks Program to acquire approximately 2,800 acres of land in Talladega County known as the Coosa River Annex. Talladega County and the Alabama Department of

Conservation and Natural Resources plan to develop the site for off-highway vehicle use, hiking and horseback riding trails, a bow hunting area for people that are physically challenged, and associated passive outdoor activities. ADECA also coordinated with the National Park Service on the transfer of approximately 300 acres of surplus property from the Department of the Army to the city of Anniston. The property became available when military operations at Fort McClellan ceased in 2001.

Goal 2-1 Inventory and assess the relative merits of the state's free flowing rivers and Goal 2-2 Prevent the loss of, and enhance recreational opportunity on Alabama's rivers.
The Alabama Water Resources Act, which created The Office of Water Resources (OWR), was passed in 1993 completing both Goal 2-1 and Goal 2-2. OWR administers programs for river basin management, river assessment, water supply assistance, water conservation, and water resources development. Further, OWR serves as the State liaison with federal agencies on major water resources related projects and conducts special studies on in-stream flow needs as well as administering environmental education and outreach programs to increase awareness of Alabama's water resources.

The State of Alabama is currently involved in two major interstate water resource activities:

1. The Alabama-Coosa-Tallapoosa (ACT) River Basin Compact—This compact, as the name implies, encompasses the Alabama River, the Coosa River, the Tallapoosa River, all their associated tributaries as well as the Cahaba River. Negotiations to develop a surface water allocation formula are underway by the States of Alabama and Georgia.

2. The Apalachicola-Chattahoochee-Flint (ACF) River Basin Compact—this compact involves the Apalachicola River, the Chattahoochee River, and the Flint River, as well as all their associated tributaries. Negotiations to develop a surface water allocation formula have been underway by the States of Alabama, Florida, and Georgia.

Both Compacts became effective on November 20, 1997, and interstate surface water allocation formulas, which are currently under negotiation, have the potential to significantly alter water quantity, quality, and associated recreational activities. A tentative agreement on basic components and allocations has been reached in the ACT Compact with the signing of a Memorandum of Understanding between the two governors on April 21, 2003. The ACT Compact has been extended until July 30, 2004 to accommodate finalizing a formula document, allow for public review and comment, and to provide for federal review.

There are still differences, primarily between the States of Florida and Georgia. Although the governors have become personally involved in the negotiations, it is still uncertain whether an agreement can be reached. It is anticipated that a number of additional meetings will be held between now and the Compact deadline to make every effort towards reaching an agreement. Additional information on each of these interstate compacts can be found on the Office of Water Resources' web site. Go to www.adeca.state.al.us and follow the links to the Office of Water Resources under the Services section.

Goal 4-1 Establish a statewide trail agenda and coordinating mechanism for a rails-to-trails, urban greenbelt or linear park program; and hiking, ORV and canoe trail initiative. Goal 4-3 Expand the Alabama trail and scenic highway system and improve access for Alabama's citizens and visitors.
The passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1993 created the Recreational Trails Program (RTP). Implementation of the RTP resulted in the establishment of the Alabama Recreational Trails Advisory Board and the designation of a state trails administrator in ADECA. The RTP was reauthorized in 1998 with the passage of the Transportation Equity Act for the 21st Century (TEA-21). Funding available through the RTP has resulted in significant improvements to Alabama's motorized and non-motorized trail resources.

The Alabama the Beautiful Act, created by the Alabama Legislature in 2000, allows a roadway to be considered for the scenic designation and includes preserving and protecting scenic, historic, natural, recreational, cultural, and archeological resources as well as promoting economic development through tourism and education in the history, culture, and natural beauty of Alabama.

Goal 5-1 Increase the scope and distribution of environmental education programs and training to facilitators, educators, and students.

It is believed that the best way to develop good stewards of Alabama's recreational, natural, and cultural resources is through education. Toward that end, the Alabama Department of Conservation and Natural Resources expanded its education programs to include:

1. **PROJECT WILD**: Six-hour introductory workshop for teachers, naturalists, youth leaders, 4-H, and scout leaders. Participants receive the Project WILD Educational Activity Guide containing over 100 activities designed to teach youth about conservation of wildlife and ecological systems. Free of charge.

2. **AQUATIC WILD**: Six-hour introductory workshop for teachers, naturalists, youth leaders, 4-H, and scout leaders. Participants receive the Aquatic WILD Educational Activity Guide containing over 40 activities designed to teach youth about conservation of aquatic habitats and ecological systems. Free of charge.

3. **PROJECT WET**: Six-hour introductory workshop for teachers, naturalists, youth leaders, 4H, and scout leaders. Participants receive the Project WET Educational Activity Guide containing over 100 activities designed to teach youth about timely topics such as water chemistry, hydrologic cycles, water uses, watersheds, and water conservation.

4. **OUTDOORS EXPERIENCES**: Three-day field course providing educators with first hand and often first time outdoor experiences (wildlife identification, seining, firearms safety/handling, fishing, night wildlife watching, etc.). Educators explore the "outdoor classroom" and discover how to utilize this exciting learning atmosphere to increase student academic achievement.

5. **DISCOVERING THE OUTDOORS**: Five-day field course based upon "Discovering Our Heritage," a model approach for whole-school integration of environmental education. Educators charged with developing an environmental education "theme" across grade levels and subject areas will find the course most beneficial. Curricula are also correlated to Alabama Science Course of Study. Alabama Wildlife Federation

6. **DELTA DISCOVERY**: Five-day field course introducing conservation principles and practices in Alabama's delta region, with particular emphasis on aquatic resources. Educators receive award-winning environmental education curricula, as well as practical guidelines for teaching them inside and outside the classroom. Curricula are correlated to Alabama Science Course of Study.

7. **BECOMING AN OUTDOORS WOMAN**: Participants receive practical instruction and beginner-level skills in such areas as camping, Dutch oven cooking, map and compass, archery, firearms safety, recreational sport shooting, hunting, fishing, backyard wildlife, nature photography, ATV handling, and first aid. $150 - includes three days, two nights lodging, and all meals at the Alabama 4H Center. Enjoy the comforts of this modern facility hidden along the shore of Lay Lake (Shelby County).

8. **STEP OUTSIDE**: Finally, an outdoor skills training program for the entire family! Success of the Becoming an Outdoors Woman program (BOW) created demand for a new type of outdoor skills program, namely, one which offers outdoor skills workshops for men, women, and children. Step Outside complements the BOW program in that it offers a series of 1-day and 2-day adventurous outdoor skills events at the local level. Step Outside introduces newcomers to traditional activities of target shooting, archery, hunting, and fishing. Because many Alabamians enjoy birding, camping, hiking, wildlife viewing, and canoeing, the Step Outside program offers skills training for these activities as well. Step Outside is a partnership between the Alabama Department of Conservation and Natural Resources, the Alabama Cooperative Extension System, the Alabama Farmers Federation, the Alabama Treasure Forest Association, and the Alabama Chapter of The Nature Conservancy.

The objectives and goals that remain incomplete in Table 1-1 below form the foundation of the current assessment and policy plan and Action Program. Issues will be reassessed in the FY 2004 Action Plan.

Table 1-1 Status summary of the issues, goals, and objectives included in the 1995 SCORP.

Table 1-1 Status of Objectives

Goals	1995 SCORP Objectives	Complete ●	In Progress ◕	Continuous ◑	In Planning ◔	Incomplete ○
Goal 1-1 Create a permanent program for the purpose of acquiring or protecting significant land and water resources for use as parks, natural and wildlife management areas.						
	Objective 1-Prepare state legislation to create a trust fund.	●				
Goal 1-2 Develop less costly alternatives to fee simple state land acquisitions.						
	Objective 1-Explore the legal status of conservation easements, draft legislation permitting the conveyance of tax-deductible easements or other similar less-than-fee interests to the state. "		◕			
	Objective 2-Acquire surplus federal property or properties managed by federal agencies which wish to transfer the land to the state; particularly if the loss of the land will result in a net decrease in recreational opportunity in the affected area.					○
Goal 1-3 Increase federal appropriation levels or those programs which can be used to acquire, protect, or manage outdoor recreation resources.						
	Objective 1- Actively support federal legislation and appropriations contributing to achieving this goal.		◕			
	Objective 2-Continue to coordinate with national and state organizations seeking to create a permanent national source of funding for recreation and natural resource management.				◔	
Goal 2-1 Inventory and assess the relative merits of the state's free flowing rivers. ADECA will initiate an assessment of the state's remaining major free flowing rivers in cooperation with National Park Service and other Federal, State, Local, and Private sector resource managers.						
	Objective 1- Identify other organizations that share an interest in a river assessment and solicit their support. Appoint an assessment team and designate a project coordinator.					○
	Objective 2- Review river assessment criteria and procedures employed by other states and federal agencies and finalize assessment method.				◔	
	Objective 3- Implement assessment methodology.					○

Goal 2-2 Prevent the Loss of, and enhance recreational opportunity on Alabama's rivers.					
Objective 1- Develop a water resource management agreement with the surrounding states regarding the diversion of water from the Coosa and Tallapoosa Rivers.		◕			
Objective 2- Maintain historical instream flows on river reaches located below reservoirs to support free flowing river habitat and river related recreational opportunities.			◑		
Objective 3- Identify problems encountered by riparian landowners that result from the recreational use of river resources and propose mitigation strategies.			◑		
Objective 4- Facilitate state and local efforts to increase river access for recreational purposes through technical and financial assistance.	●				
Goal 3-1 Increase local government recreation planning capability.					
Objective 1- Prepare a recreation planning and capital budgeting guide for local governments.					○
Objective 2- Incorporate planning requirements for park operation and maintenance in Land and Water Conservation Fund application procedures.	●				
Objective 3- Host a recreation planning workshop for local government recreation professionals, city planners, regional planning commission staff and interested elected officials.	●				
Goal 3-2 Improve the quality of existing recreation resources.					
Objective 1- Prepare and distribute a facility maintenance checklist for local government use.	●				
Objective 2- Develop an awards system for recognizing excellence in local government park maintenance, LWCF program compliance and park design.	●				
Objective 3- Develop criteria for evaluating renovation (as opposed to maintenance) projects submitted for LWCF assistance.	●				
Objective 4- Require LWCF applicants to address how they propose to finance and staff facility operation and maintenance.	●				
Objective 5- Include criteria in the state's Open Project Selection Process which gives priority consideration to applicants that have park boards, professional directors, and full time recreation staffs.	●				
Objective 6- Require that LWCF applicants address how they propose to operate and maintain park facilities if selected for assistance.			◑		

Goal 3-3 Improve Alabama's recreation technical assistance network and enhance its capability to address recreation issues and questions raised by state, local, and private sector providers.					
Objective 1- Prepare a recreation technical assistance directory or resource guide for distribution to recreation provider organizations.				◔	
Objective 2- Facilitate the exchange of technical assistance information between federal, state, and local government and private sector representatives identified in Objective 1.			◑		
Goal 3-4 Improve access to flowing and flat water resources for fishing and maintain the high quality of fishing experiences in Alabama.					
Objective 1- Construct two new freshwater boat launching areas and renovate 12 existing boat ramps.			◑		
Objective 2- Stock 900 private ponds with various species of sport fish.	●				
Objective 3- Release 3 million Florida Large Mouth, Stripped, and Hybrid Stripped bass in public water throughout Alabama.	●				
Objective 4- Assess the need for improved bank fishing areas with particular attention given to senior citizen and handicap access.			◑		
Objective 5- Develop empirical carrying capacity measures for consumptive and nonconsumptive uses of flat water in Alabama.			◑		
Goal 4-1 Establish a statewide trail agenda and coordinating mechanism for a Rails-to-Trails program, urban greenbelt or linear park program; and hiking, ORV and canoe trail initiative.					
Objective 1- Designate one person within ADECA to be the state trails coordinator.	●				
Objective 2- Prepare directory of federal, state, local and private sector trail interests in Alabama.				◔	
Objective 3- Sponsor a meeting of trail interests to establish a trail agenda and create a state trails council.			◑		
Goal 4-2 Identify linear park corridors in or near urban areas for acquisition and development as multiple use trails for walking, jogging, bicycling, and horseback riding.					
Objective 1- Prepare an assessment of abandoned railroad right of way that is presently available or becoming available for possible trail use.			◑		
Objective 2- Prepare a linear park and green space planning guide for distribution to local governments.				◔	
Objective 3- Include criteria in the states' LWCF Priority Rating System giving priority consideration to acquisition of abandoned rail right of way and canoe trail access areas.	●				

Goal 4-3 Expand the Alabama trail and scenic highway system and improve access for Alabama's citizens and visitors.					
Objective 1- Support Federal designation of the proposed Selma to Montgomery National Historic Trail.	●				
Objective 2- Develop .3 miles of handicapped accessible trail at Desoto State Park.	●				
Objective 3- Draft legislation for a state scenic highway system that reflects scenic highway requirements of pending federal legislation.	●				
Objective 4- Develop handicapped access to the scenic overlook at Bucks Pocket State Park.	●				
Objective 5- Support proposed amendments to the Federal Aid to Highways Act, which target a portion of highway funding for trail development.	●				
Goal 5-1 Increase the scope and distribution of existing environmental education programs and training to facilitators, teachers, and students.					
Objective 1- Increase the number of Project Wild certified teachers and facilitators from 2,500 to 3,000.	●				
Objective 2- Sponsor three training workshops for Project Wild teachers and one retraining workshop for facilitators.	●				
Objective 3- Assess the demand for adult outdoor experiences camps or workshops.			◑		
Objective 4- Supplement existing primary and secondary school environmental education with Department of Conservation and Alabama Forestry Commission personnel.	●				
Objective 5- Increase the number of trained facilitators for the Alabama Forestry Commission’s Project Learning Tree and encourage program expansion into additional school districts.			◑		
Objective 6- Complete the Natures Way Series for grades K-3 and begin teacher in service training.			◑		
Objective 7- Identify potential sites for the School Yard Nature Center program and prepare development and operational guidelines for schools participating in the program.	●				
Objective 8- Facilitate public and private sector education efforts on non-point source pollution through grants authorized by section 319 of the Clean Water Act.			◑		
Goal 5-2 Improve coordination between environmental education providers in order to avoid duplication and increase the efficiency and effectiveness of program delivery mechanisms.			◑		
Goal 5-3 Correlate environmental education instructional materials with the Alabama Department of Education's course of study objectives.			◑		

Goal 6-1 Support amendments to the LWCF Act which increase the stateside portion of fund appropriations from 20 percent in FY 1993 to 50 percent in FY 1996.			◑		
Goal 6-2 Establish a predictable state assistance program for recreation land acquisition, park development, and renovation.					
Objective 1- Identify alternative sources of dedicated funding for a state grant program.			◑		
Objective 2- Establish a legislative subcommittee to work with ADECA in formulating a comprehensive recreation assistance program.					○
Objective 3- Draft an amendment to the Alabama Recreation Capital Development Assistance Fund Act, which transfers the program to ADECA and amends it to include construction of indoor recreation facilities such as pools, handball courts, gymnasiums, and community centers.	●				
Objective 4- Prepare administrative regulations for the Alabama Recreation Capital Development Assistance Fund program and process in accord with the Administrative Procedures Act.	●				
Objective 5- Review Federal Urban Conservation Corps legislation to determine if state legislation is needed to implement the program in Alabama.	●				
Goal 6-3 Increase the efficiency and effectiveness of recreation delivery systems at the state and local levels.					
Objective 1- Seek to establish multi-jurisdictional sponsorship (city-city, county-city, etc.) of park facilities and explore partnership arrangements with private for-profit and private non-profit organizations.			◑		
Objective 2- Maximize carrying capacity of existing facilities with an aggressive maintenance program and professional management.			◑		
Objective 3- Solicit donations from private individuals and local businesses. Examples of proven techniques include gift catalogs and private park foundations.			◑		
Objective 4- Continue to improve maintenance of existing resources.			◑		
Objective 5- Develop system-wide park and recreation assessments and plans with broad based citizen input to ensure that needs are accurately identified.			◑		
Objective 6- Identify and develop working relationships with clientele or interest groups.			◑		
Objective 7- Increase public education and awareness regarding the value of recreation.			◑		
Goal 7-1 Ensure that state and local recreational programs are accessible to the physically handicapped.					
Objective 1- Monitor compliance status of LWCF recipients with section 504 compliance Rehabilitation Act.			◑		

Objective 2- Require Section 504 compliance before additional federal assistance is awarded to a LWCF project sponsor.	●				
Objective 3- Sponsor three workshops for governmental providers on Section 504 compliance and the provisions of the Americans with Disabilities Act.	●				
Objective 4- Include criteria within the LWCF Open Project Selection Process that considers projects specifically designed to provide recreational benefits to handicapped residents through facility construction or therapeutic recreation programming.	●				
Objective 5- Prepare a technical assistance resource directory that lists the names of individuals and organizations that are capable of assisting state and local agencies with Section 504 program assessment and/or facility design.	●				
Goal 7-2 Install TDD telephone service in ADECA to facilitate communication of grant and program related information to hearing impaired residents of Alabama.	●				
Goal 7-3 Prepare a special populations needs analysis based on results of the 1990 SCORP survey data to help identify significant differences in activity preferences and patterns.	●				
Goal 7-4 Include criteria in the state's Open Project Selection Process giving priority consideration to applications from low income jurisdictions.			◑		

Plan Goals and Objectives

The goal of this plan is to generate public and private sector action based on the expressed recreational needs, interests, and demands of Alabama residents and visitors; to serve as the basic framework to guide public and private policy decisions in the area of outdoor recreation; and, coordinate activities of recreation providers.

Specific Objectives of the 2002 Plan:

1. To revise and update the 1995 State Comprehensive Outdoor Recreation Plan.
2. To reassess existing public and selected private sector recreational resources in Alabama.
3. To reassess selected recreation activity participation rates by race, gender, age and income.
4. Revise Alabama’s wetlands plan.
5. To identify recreation activity needs by regional planning district.
6. Review Alabama's outdoor recreation planning standards.
7. To identify recreation resource base issues and develop an action/implementation program.
8. To develop an LWCF acquisition/development project selection mechanism incorporating the recommendations contained in the SCORP assessment and policy plan.

Chapter II
PHYSICAL AND NATURAL RESOURCES

Rising out of the Gulf of Mexico and extending 330 miles to the north, Alabama encompasses a diversity of natural resources that challenges the imagination. It covers nearly five degrees of latitude from the coast to mountains that rise above the 2,400-foot level. In between are the flat prairie lands of the Black Belt, the sandy Coastal Plains, the Piedmont, and the Tennessee Valley area. A wide diversity of plant life and rivers and streams supports many types of wildlife and fish, and the climate is conducive to outdoor enjoyment.

Ranking 29th among the 50 states in size, Alabama covers 52,423 square miles of land and water. About one million acres of this area is covered by water. It lies between 30 degrees 13' and 35 degrees 00' north latitude and between 84 degrees 51' and 88 degrees 33' west longitude-some 200 miles west of the Atlantic Ocean and 150 miles east of the Mississippi River.

Landscape variations of the State offer a diversity of park sites-historic, scenic, and recreational. In addition, the climate is suitable for enjoying such facilities during most of the year.

Climate

High on the list of Alabama's natural advantages is its mild climate that permits almost year-round outdoor recreational enjoyment. Extreme summer heat is almost as rare as extreme winter cold. Average annual minimum temperature varies from about 5 degrees above zero in north Alabama to about 30 degrees at the coast. Although temperatures may drop below freezing several times during winter, they seldom remain below freezing for a full day in the southern third of the State and no more than 1 to 5 days at a time in northern and central regions. Summer temperatures seldom reach the 90- to 100degree range even in extreme southern Alabama.

Alabama's mean annual temperature is about 64 degrees. The January mean varies from 42 in the northern half to 54 degrees in the southern half, while in July the mean averages about 80 degrees throughout the State. Average annual temperature varies from 60 to 64 degrees in northern Alabama to 64-70 degrees in the south. Local differences may depend on altitude and nearness to large bodies of water.

A long season without frost gives Alabama a growing season that varies from around 200 days near the Tennessee line to about 300 days at the Gulf Coast. The first killing frost usually occurs during the period October 3 to November 10 in the northern half of the State, and not until November 30 to December 10 near the coast. Danger of frost damage is usually over by February 15 to March 1 in south Alabama and by March 31 to April 10 in northern regions.

Most of Alabama's precipitation falls as rain, with only small amounts of snow occurring annually in northern portions of the State. Mean annual rainfall varies from 50 to 68 inches, but this is not uniformly distributed throughout the year for best plant growth. Mountainous areas tend to have more rain than plains regions if about the same distance from the coast. Summer rainfall (during July to September) has extreme variation, from 15 to 29 inches. Heavy summer rains in southern Alabama tend to reduce participation in outdoor recreation. The small amount of snow that falls in northern Alabama would interfere with normal outdoor activities at some time during each winter, but is not enough for wide development of snow-oriented winter sports. However, there is one ski resort in the State, but it generally relies on synthetic snow.

While having the advantage of a mild, year-round climate, Alabama also has definite seasons that provide appealing variation. November to March has cold, clear days alternating with cool or warm days that often have clouds and rain. March and April are transition months of spring flowering. The warming process

continues until May, when summer begins. Summer in the State is characterized by clear, warm weather with local afternoon thundershowers during much of the season. Late September sometimes has cool weather, but cold weather seldom arrives before late October in any one part of the state. Changing color of leaves in late October and November provides a season of beauty before the winter season and an excellent opportunity for outdoor camping, hiking, and sight-seeing.

Topography

The topography of Alabama varies from level and gently rolling to rugged and steep, with many gradations. Elevations from sea level at the Gulf of Mexico to 2,407 feet at Mount Cheaha in Cheaha State Park can be experienced. Overall slope of Alabama is from north to south, with the exception of the Tennessee Valley, which drains from east to west. The northeastern area has the roughest topography in the State. While the level of gently rolling areas is distributed throughout the State, most are found in the Prairies, Coastal Plains, and Tennessee Valley.

Topography is an important resource consideration for recreational planning. Rugged topography can contribute to the attractiveness of a recreational site but at the same time be a limiting factor in development. There are also limits on the recreational development of low lying, flood prone areas. Therefore, topography must be considered along with population density and many other factors in formulating outdoor recreational plans for Alabama.

Land Resources

Alabama's surface area totals 33,091,100 acres, of which 32,146,100 acres are land and 945,000 acres are water bodies or streams. The distribution of acreage between land and water has changed over the years as impoundment of new lakes has increased the amount of water acreage. This trend may continue, but at a much slower rate.

One problem, evident from the data in Table 2-1 is the inequity in the regional distribution of land and water acreage in relation to the population. This is especially striking in water acreage for the heavier populated areas like District 3. Planning districts with a large number of water acres are generally those containing manmade impoundments. Presently, Alabama contains a number of large man-made impoundments (25,000 to 70,000 acres). A large change in the acreage of impounded waters in the state is unlikely given the decreases in Federal funding for such projects and public opposition. Water development will be an aid to water-oriented recreation and will increase habitat for fish and wildlife. However, there is a critical need to maintain free flowing river and stream habitat for recreational use.

Almost 29 million of Alabama's acres are devoted to agricultural use crops, pasture, forest and miscellaneous farm land. This leaves about 3 million acres classified as being in non-agricultural uses-urban and built-up areas, other land uses, and waste land. Urban and industrial areas include cities, towns, other built-up areas of 10 acres or more, industrial sites, roads, railroads, cemeteries, golf courses, parks, institutional and administrative sites, and similar areas outside city limits (military and Federal land not used primarily for timber or agricultural production is included here). The other and waste area classifications include built-up areas smaller than 10 acres, and other miscellaneous areas.

There has been a continuing shift from agricultural to non-agricultural land use as more area is required for urban housing and industry. Net acreage of land available for agricultural use is reduced by both water development and increases in non-agricultural land use. Within agricultural land, the loss in acreage will largely mean a decrease in forest land. Better utilization of land within incorporated areas could help to reduce the acreage of nonagricultural land and thereby decreasing losses.

Many acres used for both agricultural and non-agricultural land can be classified as potential recreational land. Urban parks areas, scenic highways, golf courses, and development of historic sites are some of the

recreational uses suited to available non-agricultural land. Agricultural land, which encompasses a much larger and more varied area, provides a much wider range of resources for recreation.

Changes in land use affect recreation, taking land out of agricultural use reduces the amount of open space and wildlife habitat, and means less land for many types of recreation. This sequence of events is expected to continue because Alabama has a growing population, an increasing industrial base, and a growing economy. More restrictions against public use of private open lands can be expected as owners seek to protect their land from public trespass. Thus, recreational planning calls for finding ways to encourage multiple use of available land resources and smart growth management.

Table 2-1. Land and Water Acres (Large Water Impoundments) Available for Outdoor Recreation by Regional Planning District

District	Land Acres (per 1,000 Population)	Water Acres (per 1,000 Population)
1	1,105.76	453.11
2	2,381.11	178.07
3	436.21	29.93
4	1,614.14	277.81
5	2,764.44	259.24
6	4,058.06	118.10
7	2,338.39	199.14
8	1,180.38	5.78
9	206.57	58.58
10	349.62	13.71
11	906.77	197.25
12	257.84	269.77
State Average	**1,199.80**	**145.91**

Source: ADECA, Recreation Supply Inventory, 1990.

Soils

Alabama's soils are divided into seven major land resource areas: Highland Rim and Pennyroyal, Cumberland Plateau and Mountains, Southern Appalachian Ridges and Valleys, Sand Mountain, Southern Coastal Plain, Alabama-Mississippi Blackland Prairies, Southern Piedmont, and Gulf Coast Flatwoods. Suitability for growing plants varies among the soils, and these limitations are important for planning specific types of recreational facilities. Fortunately, there are literally hundreds of native plants growing on all soil types that are valuable resources for recreation. Any limitation, therefore, is mainly one of fitting site to vegetation rather than any lack of vegetation.

The Southern Coastal Plain is by far Alabama's largest soils region, occupying over 50 percent of the surface area. The Coastal Plains area was formed by sediments from erosion of the Appalachians. It is divided into the Upper Coastal Plains and Lower Coastal Plains by the Blackland Prairie region. Sandy loam soils predominate the Upper Coastal Plains, the oldest part of the Coastal Plains, which occupy the highest elevation of the region. The Lower Coastal Plains is composed of sandy loams to loamy sands, soils well suited for recreational uses.

The Southern Piedmont is the oldest geological formation in the State. It is subdivided into the Piedmont Plateau and Talladega Hills. Red sandy loams and clay loams, derived from granite, quartz, hornblende, and mica schist, make up the soils of the Piedmont Plateau. Soils of the Talladega Hills were likewise from schist and shale.

The Southern Appalachian Ridges and Valleys region covers about 13 percent of the State. As the name implies, the area consists of series of ridges and valley with soil that is deep and clayey and laid over limestone. Rugged and steep portions of this area have high scenic value.

The Sand Mountain region covers about 14 percent of the State and sandstone and shale are the principle geologic materials. Soils are sandy-loam over the sandstone and shale. The shallow depth of these soils makes erosion problems harder to control.

The Alabama, Mississippi, and Arkansas Blackland Prairie region has traditionally been referred to as the "Blackbelt." It consists of a band or belt of very dark colored calcareous clay and gray to red acid clay soils. The region is fairly flat and is characterized by a great deal of pasture and grain farming.

The other three regions, Highland Rim and Pennyroyal, Cumberland Plateau and Mountains, and Eastern Gulf Coast Flatwoods, constitute less than 4 percent of the State. While each of these regions has some unique distinguishing features, they are generally similar to adjoining regions.

Vegetation

What grows on the land is important to outdoor recreation planning. Aside from the planted and cultivated vegetation, Alabama has a wide array of native plants and trees that contribute to the economic, recreational and natural resource base.

Forests dominate the landscape, serving a dual role as the source of a major industry and provider of beauty and wildlife habitat needed for recreation. Alabama has two-thirds of its area covered by forest, making it the most extensively forested state in the Mid South.

There are five major forest types in Alabama, including longleaf-slash pine, oak-pine, oak-hickory, oak-gum-cypress, and loblolly-shortleaf pine. Loblolly shortleaf pine combination is the most prevalent, but there are sizable areas of the other types to provide statewide diversity. Red maple, American sycamore, sweetgum, flowering dogwood, hickory, persimmon, magnolia, American beech, and various varieties of trees display beautiful flowers and greenery in the spring and brilliant colors in the fall.

Although most forest land in Alabama is held under private ownership, a sizable acreage is contained in national forests, state forests, and wood-using industry lands managed to provide opportunity for recreational use.

Trees represent only one component of Alabama's outstanding vegetative cover. Approximately 4,500 wild plants have been identified in Alabama, many of which are exceptionally beautiful during certain seasons of the year. Such species as rhododendrons, wild honeysuckle, wild azaleas, dogwoods, and redbuds are outstanding in spring, and berries and leaves of many native shrubs add variety and color to fall outdoor scenes.

Certain wild plants are unusual enough to attract people who devote time and effort to protect them. A good example is the insect eating pitcher plants, which abound in certain poorly drained areas in southwestern Alabama. These plants not only provide beauty during the long flowering season, but they can be a source of interest to school and scientific groups.

Flood Plains

With the extensive river and stream system within Alabama, large flood plain areas are important components of the drainage system that carries off excess water from heavy rains. Such areas contribute much to the overall recreational potential, but they must be managed to preserve them from erosion and flooding damage. The Water Resources Division of ADECA is responsible for managing Alabama’s flood control program.

Inland Water Resources

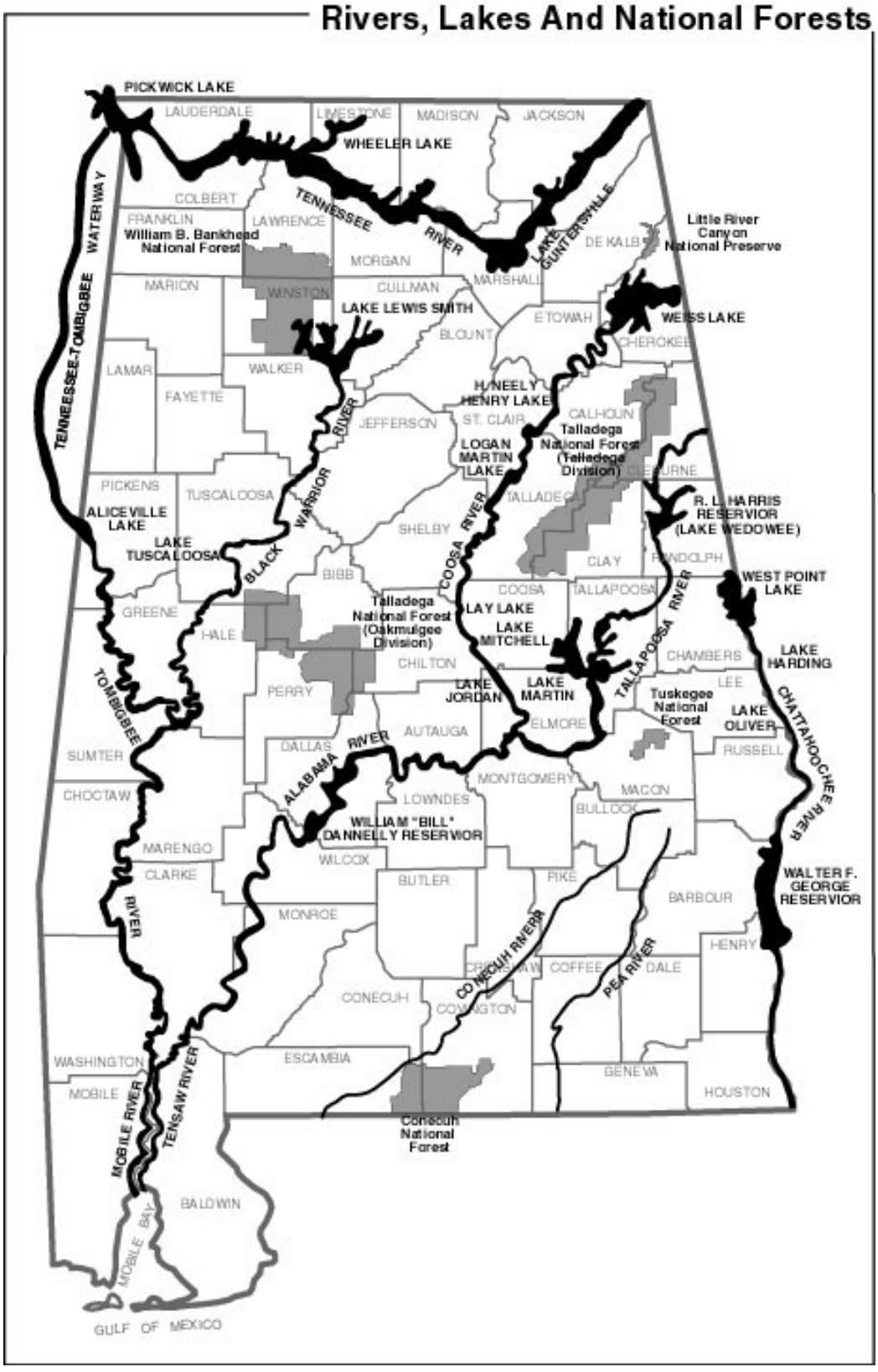
Any listing of Alabama's assets, whether from a recreational or economic standpoint, is certain to focus on water resources. This water wealth must be recognized as one of the state's most valuable assets. With 19 river drainage systems having numerous impoundments, Alabama has ample water resources to be a "water playground." These waters support boating, water skiing, swimming, fishing, and many other outdoor recreational activities are more enjoyable when carried out at a site near a body of water.

The 54 to 58 inches of annual rainfall in Alabama is handled by the 19 drainage systems that have hundreds of associated creeks. Of those 19 river systems, 16 flow in more than one state, while the Warrior, Cahaba, and Sepulga flow only in Alabama. These 19 rivers flow a combined distance of 3,074 miles in the State, and major creeks add 10,837 miles to Alabama's extensive stream system.

Most of Alabama's rivers have been impounded, thereby significantly increasing the water area of the State. Fresh water makes up over 2.5 percent of Alabama's surface area of 705 square miles, with this water acreage encompassing several types of water. Reservoirs or lakes greater than 40 acres and streams wider than 660 feet make up 54 percent of the total. Figure 2-2 shows Alabama's major river systems and impoundments.

Fresh water acreage increased greatly between 1960 and 1974, but the increase has slowed since then due to a lack of demand for more power generation impoundments and a reduced need for impoundments for navigation control on rivers. Some continued increase in the water acreage is needed since demand for water-oriented recreational activities continues to grow. From a practical standpoint, Alabama has more available water area than is shown by the data given above. The 46,000 acre Lake Eufaula is available to Alabamians, even though most of the water area is actually in Georgia. Similarly, West Point Lake covers only a small land area in Alabama but provides access to its entire 25,900 acres.

Figure 2-1 Alabama River System and Impoundments



Coastal Water, Beaches and Shoreline

Alabama's Gulf of Mexico beaches and associated areas have a great potential for recreation. With Gulf State Park at Gulf Shores as a center of activities, this area provides for millions of activity occasions every year as State residents and out-of-state visitors flock to the beach in ever-increasing numbers. The area has experienced a tremendous development boom since 1978 when Hurricane Frederick devastated the area. While this development has greatly increased access to the area for recreational purposes, it has not been without problems.

The Alabama coastline habitat available for marine life extends for 53 air miles and provides 607 miles of tidal shoreline (salt and brackish waters). Some 205 miles of shoreline is available for major recreational areas, about evenly divided between Gulf beaches and Mobile and Perdido Bays. Sand beaches account for 139 miles of the total, with 90 miles in the two bay areas where marsh land is more prevalent.

Ownership of coastline is mostly private, although there are 5 miles of State-owned public beach and scattered small areas owned by local governments. Private land ownership extends only to the mean high tide line. The State owns all of the inundated land below mean high tide. No practical way has been developed to make use of this limited land area. Thus, from a practical standpoint it can be disregarded as public recreational land for the present. Much of the shoreline is wooded, but some 56 percent of it shows signs of moderate erosion.

For inventory purposes, Alabama's estuarine area is divided into five specific regions: (1) Mobile Delta, (2) Mobile Bay, (3) Mississippi Sound, (4) Little Lagoon, and (5) Perdido Bay. The surface area involved is about equally divided between Mobile and Baldwin counties and all interact to a certain extent.

Combined, the five estuaries have 397,353 acres of open water plus 34,614 acres of marshland-a surface area totaling 431,967 acres or 674.9 square miles. Mobile Bay is the largest of the five, with a surface area of 270, 694 acres (Table 2-2).

Table 2-2. Surface area of estuaries along Alabama's coast

Estuarine Area	Open Water acres	Marsh- land acres	Total Surface acres
Mobile Delta	20,323	10,450	35,580
Mobile Bay	264,470	3,291	270,694
Mississippi Sound	92,702	11,762	104,464
Little Lagoon	2,587	299	2,886
Perdido Bay	17,271	1,072	18,343

Source: Symposium on the National Resources of the Mobile Estuary, Alabama, 1979, p. 115.

Coastal Area

The Mobile Delta is the northernmost estuarine area in Alabama, extending about 17.5 miles north of Mobile Bay. It is an area of winding rivers, creeks, branches, cutoffs, sloughs, forks, bays, and bayous. Some 250 separate waterways have been charted and identified by name. The surface area of the Delta is marsh and swamp land that supports some hardwood trees, other plants, and wildlife, while the waters of the Delta are rich with fish. Portions also support other marine life. The Mobile-Tensaw River bottom, an area that extends from Mobile Bay north for a distance of 35 miles and includes the Delta, is a National Natural Landmark.

Joining the Mobile Delta at Battleship Parkway is the estuarine region known as Mobile Bay, the largest and most important of the five. It is more than 31 miles long and ranges from 8 to 10 miles wide at the north to about 24 miles wide in the lower reaches of Bon Secour Bay. Mostly open water, Mobile Bay estuary includes more than 6,000 acres of marshland and has a shoreline 142.4 miles long. Major water

areas of this estuary include Pelican Bay, Dog River, Halls Mill Creek, Rabbit Creek, Alligator Bayou, Perch Creek, Robinson Bayou, Rattlesnake Bayou, Moore Creek, East Fowl River, Deer River, Weeks Bay, John Ducker Bay, Oyster Bay, Bon Secour Bay, Fish River, Blakeley River, D'Olive Bay, Magnolia River, Apalachee River, D'Olive Creek, and Fly Creek.

The Mississippi Sound estuary is located east of the Alabama-Mississippi state line, west of the Dauphin Island Causeway, north of Dauphin Island, and south of the Mobile County mainland. Its shoreline along the Alabama mainland (the northern estuary boundary) is composed of salt marshes. The area has 101 miles of marsh shoreline and 24 miles of sand beach shoreline plus the sand beaches of Dauphin Island. Most shoreline is undeveloped, except for that on Dauphin Island and the marsh area that includes Bayou La Batre, Coden and Heron Bays. Of the several islands in the Sound, only Dauphin Island has access other than by water.

The smallest of the estuaries is Little Lagoon, which has one inlet (only periodically open) connecting it to the Gulf of Mexico. Its location near the Gulf makes a valuable resource for the area's overall recreational program.

Perdido Bay, the estuary that serves as part of the Alabama-Florida state line, also empties directly into the Gulf of Mexico. Moderate residential and recreational developments are located on portions of the Perdido Bay area-Orange Beach, Perdido Beach, Mill Point, Suarze Point, and Callway landing. Location of this estuary makes it particularly suited for developing recreational facilities centering on natural-area viewing.

Wild, Scenic, and Recreational Rivers

The Federal Wild and Scenic Rivers Act (Public Law 90-542) spurred national interest in the preservation of free flowing rivers. While Alabama is blessed with more than 12,000 miles of rivers, the numbers that are free-flowing has diminished considerably over the years. All of the state's major river systems have impoundments, either for hydro-electric generation or navigation control. Relatively few rivers remain free-flowing; however, several have been considered for inclusion under the Wild and Scenic Rivers Act.

The Cahaba River, Escatawpa River, Sipsey River, and Soldiers Creek were studied as potential candidates for inclusion in the Wild and Scenic Rivers program. Eight others were suggested for study in a letter from the Governor of Alabama to the Secretary of the Interior. These were the Tallapoosa River, Shoal Creek (in Calhoun and Cleburne Counties), Locust Fork of the Warrior River (Blount County), Little River (DeKalb and Cherokee Counties), Cypress Creek, Conecuh River, Styx River, and Perdido River. The Alabama Department of Conservation and Natural Resources then added two more, Hatchet Creek and West Fork Sipsey, for the Alabama study. The studies were completed by 1984, and while portions were eligible for federal designation, only that portion of the Sipsey River within the Bankhead National Forest was included in the Wild and Scenic River System.

The Cahaba River has many characteristics that recommend it for the Wild, Scenic, and Recreational Rivers Program, and there has been widespread support for its inclusion. The longest remaining major free-flowing river in Alabama, it is regarded by many as the most beautiful, interesting, productive, historical, and richest river in the Southeast. Sheer rock bluffs towering 100 feet or higher above the stream are unique scenes in themselves. In the spring flowering plants to add to the beauty, while fall color changes are just as spectacular. Plants, fish and wildlife vary widely as the river moves through different geological formations. Strip mining and high city water withdrawals, however, are having detrimental effects on this stream.

The Cahaba River was protected by state legislation passed in 1985. A Cahaba River Corridor Commission was created and made responsible for overseeing the river and ensuring that its unique qualities are preserved. The region's first multi-government land use plan for balancing environmental protection and growth - the Upper Cahaba Watershed Study –was initiated in 2002.

Although the West Fork Sipsey does not meet the program's recommendation of having at least 25 miles of free-flowing length, it was also included in the bill signed by President Ford. This stream is related to the Sipsey Wilderness, which adds to its importance as a recreational resource.

Little River and the associated Little River Canyon area are of such natural and scenic quality that the Alabama Legislature in the 1969 Regular Session designated Little River from south of State Highway 35 bridge to the mouth of the Canyon as a State Wild and Scenic River (Act No. 465).

The National Park Service, acting in response to congressional direction, assessed the Canyon area in 1988 and concluded that it merited additional study as a potential national park or national recreation area. A special resource study was authorized by the Congress in 1989 and the draft study report, released in the fall 1990, classified the river in three segments: 1) Scenic-Three and three-tenths miles from Lake Weiss to 1 mile above the Alabama Highway 273 bridge. 2) Wild-From 1 mile above the Alabama Highway 273 bridge to the Alabama State Highway 35 bridge (approximately 11 miles). 3) Scenic-From the Alabama State Highway 35 bridge to Desoto Falls on the west fork and the east fork from its confluence with the west fork to Lake Lahusage (approximately 24 miles). Little River Canyon has since been transferred to the National Park Service and is being managed as a National Preserve and Recreation Area.

White Water Recreation

While Alabama is not widely known for its white water recreation, numerous opportunities exist at various times throughout the year. The 1990 Nationwide White water Inventory lists 20 segments in Alabama totaling 185.5 miles that provide white water experiences for everyone from novices (Class I rapids) to seasoned experts (Class V rapids). Mr. John Foshee, in his book "*Alabama Canoe Rides and Float Trips*" provides detailed information on many other stream reaches that offer excellent canoeing opportunities at selected times.

The rivers of Alabama that were suggested for inclusion in the State Wild and Scenic Rivers Program, as well as other streams in the State, are important resources that contribute greatly to the entire outdoor recreational program. To date, only the portion of the Sipsey River passing through the Sipsey Wilderness has been designated under the Federal Wild and Scenic Rivers Act. As discussed, state protection has been afforded the Cahaba and part of Little River. If we are to continue to have free-flowing rivers and streams for recreation and for the preservation of part of our natural heritage, more legislative protection for this vanishing resource will be needed.

Animal Life

Any discussion of Alabama's animal wildlife, whether wildlife for hunting (consumptive use) or animals that are enjoyed just by observing (nonconsumptive use), must begin with the supply of habitat suited to such animals. Large acreage of forest and other land isolated from human habitation indicate that Alabama has an abundance of wildlife habitat. However, more than land area is required. The right combination of physical and biological conditions is necessary to produce the desired environment for particular species. Such factors as landowner restrictions, location of population centers, pollution, and type of land management all serve to limit quantity and quality of habitat types.

In general, habitat conditions in Alabama are both diverse and extensive, providing abundant opportunity for wildlife propagation. In an effort to provide better management of our state's natural diversity, the Department of Conservation and Natural Resources began development of the Alabama Natural Diversity Inventory (ANDI) in 1984 under contract with the Natural Resources Center at the University of Alabama. The Department of Conservation has since institutionalized an inventory program within the State Lands Division in addition to its Non-game Wildlife Program in the Game and Freshwater Fisheries Division.

Alabama's wildlife is as varied as the habitat, which supports it. Birds, land animals, and water creatures found in other parts of the Southeast are generally found in Alabama. The supply is generally adequate for bird watchers, anglers, hunters, or other interested groups, but many areas are not always open to the public.

Birds A total of 352 species of birds has been recorded for Alabama, although there have been questions raised concerning the occurrence of 46 of these. Some 154 of the total list are known to breed in Alabama, and others visit in the State but do not breed here. The largest numbers of species are usually found in the Dauphin Island area. Approximately 185 different bird species have been identified as visitors or residents of the Eufaula National Wildlife Refuge.

There are 46 game birds that can be hunted in Alabama during their respective open seasons, including ducks, geese, turkey, dove, bobwhite quail, woodcocks, snipe, rails, and coots. Wild turkey is a particularly desirable species now found in every county of the state.

Game animals The white-tailed deer is found in every county of the state. At one time there was only a scattering of deer concentrated in fewer than half of the counties. A successful program of stocking and programs of managing land to encourage deer was sponsored by the Game and Fish Division of the Alabama Department of Conservation and Natural Resources. Those measures, along with changing agricultural practices, have increased the deer population to levels thought to be higher than when Indians were the only inhabitants of the region. Many parts of the state have experienced problems of deer over-population, which have resulted in forest and crop damage as well as deterioration in the quality of some deer herds.

Other frequently hunted game animals that abound in Alabama include squirrel, rabbit, raccoon, opossum, and fox. Rabbits and other small game animals are able to adapt to more thickly settled areas than deer or wild turkey thereby providing game for hunting close to urban areas. The plant life of roadsides, gardens, parks, cemeteries, pastures, orchards, cropland, hayfields, campuses, airports, playfields, and other recreational areas is so well suited to rabbits and other small game that increasing small game populations often result with urbanization.

Nongame Animals In the past, nongame species were not given special attention because wildlife management was geared toward the hunting population. An increased environmental awareness and broadened interest in Alabama's nongame species have since developed. The 1982 Alabama Legislature created the Nongame Wildlife Fund to help preserve this state's diverse nongame wildlife. This program is funded through an income tax refund check off. The program has already developed several projects and instituted activities benefiting nongame species. Assuming that the absolute number of hunting continues to decline, programs of this type will improve the future for nonconsumptive recreational use of our wildlife resources.

Water Creatures Alabama's rivers, creeks, inland impoundments, and large expanses of brackish and salt water provide an abundance of sport fish and other water creatures. There are more than 200 species of fresh water fish plus an estimated 300 in salt water. The most sought after fresh water sport fish are largemouth, smallmouth, and striped bass; crappie; catfish; bluegill and shellcracker bream. Alabama's Gulf Coast and adjacent salt water offer such species as tarpon (the state fish,) flounder, dolphin, bonita, sailfish, spanish and king mackerel, and red snapper. Brackish waters have the speckled trout, sheepshead, and redfish. Aside from sports fish, there are also shellfish and crabs, as well as alligators and some of the most varied populations of turtle species to be found anywhere in the United States.

Threatened, Endangered, or Otherwise Unique Species The U.S. Fish and Wildlife Service's Threatened and Endangered Species System (TESS) lists 115 animals and plants in Alabama.

Congress passed the Endangered Species Preservation Act in 1966. This law allowed listing of only native animal species as endangered and provided limited means for the protection of species so listed. The Departments of Interior, Agriculture, and Defense were to seek to protect listed species, and insofar as consistent with their primary purposes, preserve the habitats of such species. Land acquisition for protection of endangered species was also authorized.

The Endangered Species Conservation Act of 1969 was passed to provide additional protection to species in danger of "worldwide extinction". Import of such species was prohibited, as was their

subsequent sale within the U.S. This Act called for an international ministerial meeting to adopt a convention on the conservation of endangered species.

In 1973, the Endangered Species Act (Public Law 93-205) was passed, which combined and considerably strengthened the provisions of its predecessors, and broke some new ground.

The U.S. Fish and Wildlife Service (USFWS) is a principal source of assistance to preserve habitat and threatened and/or endangered species in Alabama. In 2002, the USFWS allocated $101,750 to develop a Habitat Conservation Plan (HCP) for the Alabama Beach Mouse and Sea Turtles in Baldwin County. This grant will help support Baldwin County's plan to incorporate single lot owners into a habitat conservation effort for the endangered Alabama beach mouse as well as three federally- listed species of sea turtles on Fort Morgan peninsula. The entire range-wide habitat for the Alabama beach mouse is on this peninsula. The planning area also includes nesting beaches important for maintaining northern Gulf of Mexico populations of loggerhead, green, and Kemp's Ridley sea turtles. Southern Baldwin County along the Gulf of Mexico is a rapidly growing commercial, recreational and residential area faced with increasing development pressure for higher density housing. This HCP aims at assisting county managers to address those needs while protecting federally and state-listed species.

Wilderness Areas

"Wilderness" is a rather nonspecific term, with definition varying among different people. However, the word brings to mind the concept of a "primitive setting, well removed from the civilized world, where nature rather than man is the dominant feature." Alabama's wilderness areas total 41,447 acres and are controlled and managed by the U.S. Forest Service. The Forest Service's management plan states that the wilderness areas will be managed according to provisions of the Wilderness Act of 1964, the Eastern Wilderness Act of 1975, and site-specific management plans.

Alabama's has three recognized wilderness areas. These are the Sipsey Wilderness, the Cheaha Wilderness and Dugger Mountain Wilderness areas. The Sipsey Scenic Area was made a "Wilderness Area" in accordance with provisions of the National Wilderness Act. A bill signed in January 1975 by President Ford officially established this 25,002-acre site in the Bankhead National Forest as a Wilderness Area. The heart of the area that is being preserved in its almost virgin state is an extensive block canyon cut deeply in native rock through which flows the Bee Branch of the West Fork Sipsey River. Canyon walls range up to 100 feet high and permit only limited access to the smaller area of large timber and outstanding botanical and scenic beauty. Waterfalls flow along gorges and canyons, and there are numerous overhangs. Difficult access prevented logging operations and preserved much virgin timber, some of the last remnants of virgin cove hardwood forest known in the South. The largest known yellow poplar in Alabama, measuring 80 inches in diameter and 150 feet in height, is near the head of the east fork of the Bee Branch. Forest understory is diverse, with some rare and unusual species. Because of the remoteness and diverse habitat, unusual animal life represents another valuable resource. The Sipsey botanical area is a worthy addition to the company of Wilderness Areas, and continues to be a valuable resource for Alabama.

The Cheaha Wilderness area is in the Talladega National Forest and covers approximately 7,245 acres. It consists of relatively rugged, hilly terrain and is nestled deep in the national forest, far removed from development. Access to the area is provided by the Pinhoti Trail and the Odum Scout Trail.

The Dugger Mountain Wilderness is part of the Talladega National Forest in Calhoun County; it is one of the last intact roadless areas in Alabama's National Forests. Scientific studies have shown that Dugger's forests are home to hundreds of species of plants and animals, some that are new to science. Additionally, important historical sites have been located on the mountain along with structures left behind by pioneers and Native Americans. In December 1999, the Dugger Mountain Wilderness area comprising 9,200 acres was created by Congress.

Unique Natural Features

The list of natural features that merit separate attention as outdoor recreational resources because of distinctive or unusual character could run to great lengths. Such features include waterfalls, caves and caverns, natural bridges, rare or unusual plant species, mountain peaks, rock formations, and artesian wells. Features of this sort attract numerous people every year-those who come out of simple curiosity and those who come to give serious study to such sites.

Little River and Little River Canyon represent one of the State's truly extraordinary natural features. This area is a National Preserve managed by the National Park Service and the State Parks Division of the Alabama Department of Conservation and Natural Resources.

Walls of Jericho, located astride the Alabama-Tennessee line with Alabama's portion in Jackson County, are a rugged area characterized by high cliffs along a stream. It is a site of botanical significance that contains a large population of small game for hunting, but is protected because of difficulty in reaching the site.

The Dismal Wonder Gardens in Franklin County is a National Natural Landmark that is privately operated as a tourist attraction.

Shelta Cave in Huntsville (Madison County) was the first Alabama site selected to be a National Natural Landmark. It is one of the most floristically diverse caves known and contains the only known location of several species. While the cave is protected by private ownership, it may still be subject to the impacts of Huntsville urbanization on the quality of water that flows through the cave.

In adjacent Limestone County is another Landmark area named Beaverdam Creek Swamp. These 530 acres of prime Tupelo Gum Swamp land lies within the Wheeler National Wildlife Refuge.

Cathedral Caverns near the Town of Grant also appears on the list of National Natural Landmarks. Although once a commercial venture, it was acquired by the Department of Conservation and Natural Resources in 1986. Improvements to the cave during the mid 1990's with assistance provided by the Alabama Department of Transportation improved accessibility through the cave. Future plans for this park include development of campgrounds, picnic areas, trails and support facilities.

The Mobile River Delta is one of the most productive delta-estuaries in North America, and is a National Natural Landmark. It is particularly important to the maintenance of Alabama's marine industries, which include both commercial and recreational fisheries. The Weeks Bay Estuarine Reserve was established to protect a portion of this unique estuarine habitat. In 1990 and 1991, the U. S. Army Corps of Engineers acquired an additional 20,000 acres of the Delta as partial mitigation of the Tennessee-Tombigbee Waterway development. An additional 40,000 acres were acquired in 2001 with funding from Alabama's Forever Wild Program and assistance from the Nature Conservancy and the U.S. Department of the Interior, U.S. Fish and Wildlife Service.

Newsome Sinks, located in eastern Morgan County, offers easy access to unusual geologic formations such as large sinkholes and some 40 caves with over 50,000 feet of subterranean passages.

Finally, Alabama's pitcher plant bogs are found mainly in the coastal and northeastern parts of the state. These bogs represent a very unusual and delicate natural community and frequently contain rare or endangered plants.

CHAPTER III
ALABAMA'S RECREATION PROVIDERS

Outdoor recreation providers in Alabama include several federal and state agencies, county and city governments, private non-profit organizations, and private for-profit organizations. The following is an assessment of the roles played by the state's providers.

Federal Agency Programs

The federal government has played a major role in providing recreational services and facilities in Alabama. Federal programs have included physical recreation facilities as well as financial assistance for recreation development. There are 1,154,741 acres of land and thousands of acres of water in this state that are owned by the federal government and made available for outdoor recreation. These resources are provided in National Parks, National Forests, National Wildlife Refuges, federal reservoirs and lakes, parkways, and other recreational areas.

Up until 1980, many federal agencies were involved in providing outdoor recreation in Alabama, some of them quite heavily in terms of financial commitment. Since 1980 the key word in many federal programs has been cutback. Budgets have been cut, programs discontinued, agency priorities re-evaluated (with recreation getting a lower priority), and agency staffs reduced. All of these developments point to less federal involvement in outdoor recreation, even to the point of closing some facilities due to a lack of operating capital or personnel. The Federal government should continue to be concerned with the preservation and quality development of the natural resources and historic treasures that are of national significance, while developing outdoor recreational programs that provide public welfare benefits not furnished by state and local governments or private enterprise.

Some of the areas in which the Federal government should continue to exercise responsibility include:

1. providing high quality recreational opportunities on its land and water resource holdings;
2. preserving outstanding natural areas, wetlands, historic places and sites, and some open spaces within its present and future resource ownership;
3. providing technical and financial assistance for state and local recreational acquisition and development programs;
4. providing technical assistance to the private recreational sector; and
5. providing technical and financial assistance for environmental education

Federal agencies which are or have been involved in outdoor recreation in Alabama include the departments of Agriculture, Defense, Interior, and Housing and Urban Development and, the Tennessee Valley Authority. While other federal agencies have programs which may be indirectly tied to outdoor recreation, those listed above are the primary providers. The following is a brief discussion of these agencies and their involvement.

U.S. Department of the Interior

The Department of the Interior is responsible for the administration of the nation's scenic and historic areas; the conservation, development, and utilization of fish and wildlife resources; and the coordination of federal and state recreational programs. The two agencies involved in providing these services in Alabama include the National Park Service and the U.S. Fish and Wildlife Service.

National Park Service

Six areas owned, operated or managed by the National Park Service in Alabama are Horseshoe Bend National Military Park, the Tuskegee Institute National Historic Site, Russell Cave National Monument, the Selma to Montgomery National Historic Trail and a portion of the Natchez Trace Parkway. The Selma-Montgomery Trail was designated an Alabama State Scenic Highway and National Scenic Byway in 1995, and the state's only All American Road in January 1996.

Congress added the Little River Canyon National Preserve to the national park system in 1992. This 14,000-acre preserve protects the nation's longest mountaintop river, which flows for almost its entire length down the middle of Lookout Mountain in northeast Alabama. Over eons of geologic time, Little River has carved out one of the Southeast's deepest canyons as it winds its way from headwaters in Georgia before exiting the mountain and emptying into Weiss Lake near Leesburg, Alabama. The Preserve is a biologically diverse area with a number of rare plants and animals such as the green pitcher plant, and endangered fish called blue shiner and the green salamander.

These facilities highlight some of Alabama's unique historic and natural features and provide for the protection and preservation of these resources for the enjoyment of future generations. Additional information about the National Park Service's sites in Alabama can be obtained at www.nps.gov.

The National Park Service has been very much involved in funding and coordinating recreation development at the federal, state and local level through the Land and Water Conservation Fund and, to a lesser extent, the Urban Parks and Recreation Recovery Program. The Statewide Comprehensive Outdoor Recreation Plan, which is a requirement for participation in the LWCF program, is the basis for allocating funding received from these programs and acts as a coordinating element for recreation development in the state.

The National Natural Landmarks Program, the National Registry of Historic Places and Historic Landmarks, and the National Scenic and Historic Trails System are also programs that the National Park Service administers. Listed under the National Natural Landmarks Program in Alabama are the Dismals, Cathedral Cavern, Little River Canyon, Newsome Sinks, the Mobile River Delta, Beaverdam Creek Swamp and other special features. Under the historic places and landmarks program, 268 historic places and 17 historic landmarks are listed. While some other trails have been recommended for inclusion in the scenic and historic trails system, so far the only representatives in Alabama is a portion of the Natchez Trace and the Selma to Montgomery National Historic Trail.

The DOI also administers the Federal Surplus Real Property Program. Under the Federal Property and Administrative Services Act of 1949 (40 United States Code 484), the Department of the Interior may convey up to 100 percent fair market value discount any surplus Federal real property which have been determined to be of potential use as a public park or historic monument to any state or political subdivision thereof. To date, 10 former Federal properties consisting of 984 acres and valued at over $1.5 million have been conveyed for public park and public recreational purposes. ADECA is currently working with Talladega County to obtain 2,800 acres of surplus property known as the Coosa River Annex for outdoor recreation through the Federal Lands to Parks Program. It is also working with the town of Dauphin Island to acquire a historic lighthouse in Mobile Bay.

The Rivers, Trails and Conservation Assistance Program, also known as Rivers & Trails or RTCA, works with community groups and local and State governments to conserve rivers, preserve open space, and develop trails and greenways. Rivers & Trails works in urban, rural, and suburban communities with the goal of helping communities achieve on-the-ground conservation successes for their projects. RTCA focuses on helping communities help themselves by providing expertise and experience from around the nation. From urban promenades, to trails along abandoned railroad rights-of-way to wildlife corridors, RTCA assistance in greenway efforts is wide ranging. Similarly, RTCA assistance in river conservation spans downtown riverfronts to regional water trails to stream restoration.

The Partnership Wild and Scenic Rivers Program is a subset of the greater National Wild and Scenic Rivers System which helps communities preserve and manage their own river-related resources locally by bringing together State, county, and community managers to preserve the outstanding and remarkable values for which the rivers were set aside.

Fish and Wildlife Service

The U.S. Fish and Wildlife Service has a goal of conserving the nation's wild birds, animals, and sport fish which have inherent recreational and economic value. A key element in attaining this goal is the National Wildlife Refuge System. There are five national refuges located in Alabama, which include Wheeler,

Eufaula, Weeks Bay, Bon Secour, and Choctaw. These areas support recreation activities such as nature study, fishing, hunting, picnicking, and hiking.

The U.S. Fish and Wildlife Service also administers two funding programs which are aimed at conserving fish and wildlife with recreational or economic value. These are the Pittman-Robertson and Dingell-Johnson Federal Aid Programs. The Pittman-Robertson Program is funded through an excise tax on sporting firearms and ammunition and is used for the restoration and preservation of wildlife. The **Dingell-Johnson Program** is funded through an excise tax on fishing tackle and equipment and is used to fund boat ramp construction, fish habitat improvements, stream surveys, fish studies, and other similar activities. These programs have been extremely important funding sources in the preservation and development of the state's fish and wildlife resources.

U.S. Department of Agriculture

The Department of Agriculture through its various agencies performs many functions relating to agriculture and rural development, and is involved in recreation and recreational development. Those agencies involved in recreation in Alabama include the Forest Service, Natural Resources Conservation Service (NRCS), Farmers Home Administration, Agricultural Stabilization and Conservation Service, and the Cooperative Research, Education and Extension Service.

U.S. Forest Service

In Alabama, the Forest Service manages five forest units with a total of 665,981 acres of land with over 400 miles of rivers running through it. Through the concept of multiple use management on the National Forests, the service is very much involved in outdoor recreation. The national forests located in Alabama are the William B. Bankhead National Forest, Conecuh National Forest, Tuskegee National Forest, and the Talladega National Forest which is split into two units, the Oakmulgee Division and the Talladega Division.

Table 3-1 National Forest of Alabama

Unit Name	Gross Acreage	NFS Acreage	Other Acreage
Conecuh NF	171,177	83,858	87,319
Talladega NF	740,773	389,834	350,939
Tuskegee NF	15,628	11,252	4,376
William B. Bankhead NF	348,758	180,997	167,761
National Forests Totals	**1,276,336**	**665,941**	**610,395**

Recreational opportunities on the national forests include scenic driving, picnicking, hiking, backpacking, camping, fishing, hunting, boating, white water canoeing and rafting. The forests also contain the only federally designated wilderness areas in the state, the Sipsey Wilderness and the Cheaha Wilderness.

Table 3-2 Wilderness Areas of Alabama

Unit Name	Gross Acreage	NFS Acreage	Other Acreage
Cheaha-Talladega NF	7,245	7,245	0
Dugger Mountain-Talladega NF	9,200	9,200	0
Sipsey-Bankhead NF	25,002	24,922	80
State Total	**41,447**	**41,367**	**80**

The Forest Service proposes more trails in the expanded Sipsey Wilderness and horseback riding trails in the Talladega Division of the Talladega National Forest. However, reduced appropriations for such improvements will delay development.

Soil Conservation Service
The Soil Conservation Service (SCS) has provided a great deal of water-based recreation in rural areas through its Rural Conservation and Development program. This program provided 50/50 matching funds to county and city governments for the purpose of developing water based recreation facilities. The program was discontinued in 1983 although some money remains in the fund to finish projects started before that time.

The SCS provides recreation technical assistance to local governments and private citizens. Primary objectives of the agency include control of erosion on croplands, conservation of water, and improvement of stream water quality through promotion of improved agricultural practices. The SCS staff has been reduced over the last five years and manpower will be allocated to meeting the primary objectives of the agency first.

Farmers Home Administration
The Farmers Home Administration (FmHA) has provided assistance in recreational development through its loan program. Up until 1980 the FmHA could loan money to private non-profit organizations and local government entities for the purpose of acquiring lands and developing recreation facilities. Adverse court decisions on cases involving loans to organizations such as these has forced the FmHA to change its loan policies and exclude such projects from consideration.

The FmHA is authorized to make loans for recreational enterprises to farmers and ranchers who manage and operate family farms. These loans are aimed at helping borrowers develop recreational enterprises that will supplement farm incomes.

Agricultural Stabilization and Conservation Service
The Agricultural Stabilization and Conservation Service (ASCS) while not directly involved in recreational development, provides funding to private non-industrial landowners for land improvements. Improvements include timber management systems and erosion control projects. These improvements often benefit fish and wildlife and therefore enhance those recreational resources.

Funding programs administered by the ASCS include the Forestry Incentive Program and the Agricultural Conservation Program.

Alabama Cooperative Extension Service
The Extension Service is a cooperative undertaking between the U.S. Department of Agriculture, the Land Grant Colleges, and local county governmental bodies. The objective of the Extension Service in recreation is to provide leadership and assistance to public groups, agencies, private organizations, and individuals in the development of outdoor recreational facilities. These services are available through county extension offices and the state staff.

U.S. Department of Defense

The Department of Defense has jurisdiction over the Department of the Army, Navy, Air Force and Coast Guard. It is very much involved in water-based recreation in the state through the U.S. Army Corps of Engineers. The Defense Department is also actively involved in providing recreation at the state's military facilities.

Army Corps of Engineers
The Army Corps of Engineers (ACOE) is making major contributions to Alabama's outdoor recreation program through its recreation development projects and natural resource protection functions. Presently, it provides 14 impoundments and over 100 public use areas, which add significantly to the quality of recreation in the state. The ACOE's primary responsibilities are for waterway navigation, flood control, beach erosion control, and river basin studies. Other responsibilities include protection of water quality, permit authority over dredge, and fill operations involving wetlands.

ACOE recreation projects provide picnicking, swimming, camping, and boat launching facilities. These projects are particularly significant in that they provide public access to some of Alabama's major river systems.

No new recreation projects are planned by the ACOE in Alabama. This is primarily the result of a new agency objective to reduce competition between the federal government and private providers of recreation. While existing recreation facilities will be maintained, the Corps continues to transfer selected facilities to other public agencies.

New recreation facilities could be built using ACOE funds through cost sharing arrangements with state and local governments or recreation councils created by act of the legislature. Only projects in which the recreation benefits account for less than 50 percent of the total benefits of the project are considered. Cost sharers will have to provide 50 percent of the development cost, agree to operate and maintain the site, and provide funds for the maintenance of one or more nearby ACOE facilities. The funds provided by the cost sharer under this last provision will have to be equal to the federal share of the cost share project amortized over the life of the facilities developed.

Military Bases

Several different branches of the military have installations in Alabama. Combined, these areas cover over 400,000 acres, with over 100,000 acres used for some form of outdoor recreation. Most of the area is undeveloped forest land; however, there are also a number of developed recreation facilities. Developed facilities include playfields, playgrounds, golf courses, tennis courts, basketball courts, ball fields, swimming pools, picnic areas, camping areas, and water based facilities. Much of the undeveloped forest land is open for hunting and some lakes and small ponds are available for fishing. These facilities are available for use by active duty and retired military personnel, their dependents, and, in some cases, local residents

Military installations are valuable economic assets. The recreation facilities located on them help meet a portion of the state's recreation demand and reduce user pressure on local recreation facilities near these installations.

Tennessee Valley Authority

The Tennessee Valley Authority's (TVA) system of dams and reservoirs has made a major contribution to recreation in Alabama. Four TVA reservoirs (Pickwick, Wilson, Wheeler, and Guntersville) are located entirely or partially in the state.

These lakes provide 193,600 acres of surface water and 2,662 miles of shoreline. They include water surfaces ranging from broad, open expanses to deep, winding waters with rugged shorelines of wooded mountain slopes. Collectively, these four TVA reservoirs extend the entire width of the state and offer an unparalleled variety of scenic beauty. In addition to these valuable water resources, 82,200 acres of shoreland controlled by TVA are open to the public for informal recreational use.

TVA has also constructed four dams and reservoirs on Bear Creek and its major tributaries in north Alabama, which impounded 8,260 acres of surface water. The 15,275 shoreland acres around these reservoirs are managed by the Bear Creek Development Authority (BCDA), a state agency established under a cooperative agreement with TVA.

TVA has made its land and water resources available for development of a wide variety of recreational areas. Developments include a national parkway, a national wildlife refuge, state parks, several water access areas, state wildlife management areas, public shooting areas, county and city parks, and numerous privately developed recreation facilities.

U.S. Department of Transportation

The Federal Highway Administration, U.S. Department of Transportation (DOT) cooperates with the Alabama Department of Transportation (ALDOT) and ADECA in developing highways that serve sightseeing purposes as well as transportation functions. Many of Alabama's outdoor recreational areas are served by the Federal-aid primary, secondary, and interstate highway systems and urban extensions. The role ALDOT plays in the area of recreation increased substantially with the inclusion of the scenic byway program, Recreational Trails Program, Congestion Mitigation and Air Quality Improvement Program and transportation enhancements were included in the Intermodal Surface Transportation Efficiency Act (1993) and Transportation Equity Act for the 21st Century (1998).

Four other agencies/programs, which have assisted in the development of outdoor recreation resources in Alabama, are the Economic Development Administration, Appalachian Regional Commission, U.S. Department of Housing and Urban Development, Community Development Block Grant Program and the Department of Commerce's Coastal Zone Management Program. Of these, the Coastal Zone Management (CZM) Program has a more direct link to the environmental and recreational issues addressed herein. Section 1452 Coastal Zone Management Act Of 1972 as amended through P.L. 104- 150, The Coastal Zone Protection Act of 1996, Congress established the following national policy (Section 303):

> The Congress finds and declares that it is the national policy--
>
> (1) to preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations;
>
> (2) to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and esthetic values as well as the needs for compatible economic development, which programs should at least provide for--
>
> > (A) the protection of natural resources, including wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitat, within the coastal zone,
> >
> > (B) the management of coastal development to minimize the loss of life and property caused by improper development in flood-prone, storm surge, geological hazard, and erosion-prone areas and in areas likely to be affected by or vulnerable to sea level rise, land subsidence, and saltwater intrusion, and by the destruction of natural protective features such as beaches, dunes, wetlands, and barrier islands,
> >
> > (C) the management of coastal development to improve, safeguard, and restore the quality of coastal waters, and to protect natural resources and existing uses of those waters,
> >
> > (D) priority consideration being given to coastal-dependent uses and orderly processes for siting major facilities related to national defense, energy, fisheries development, recreation, ports and transportation, and the location, to the maximum extent practicable, of new commercial and industrial developments in or adjacent to areas where such development already exists,
> >
> > (E) public access to the coasts for recreation purposes,
> >
> > (F) assistance in the redevelopment of deteriorating urban waterfronts and ports, and sensitive preservation and restoration of historic, cultural, and esthetic coastal features,

(G) the coordination and simplification of procedures in order to ensure expedited governmental decision making for the management of coastal resources,

(H) continued consultation and coordination with, and the giving of adequate consideration to the views of, affected Federal agencies,

(I) the giving of timely and effective notification of, and opportunities for public and local government participation in, coastal management decision making,

(J) assistance to support comprehensive planning, conservation, and management for living marine resources, including planning for the siting of pollution control and aquaculture facilities within the coastal zone, and improved coordination between State and Federal coastal zone management agencies and State and wildlife agencies, and

(K) the study and development, in any case in which the Secretary considers it to be appropriate, of plans for addressing the adverse effects upon the coastal zone of land subsidence and of sea level rise; and

(3) to encourage the preparation of special area management plans which provide for increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise, or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making;

(4) to encourage the participation and cooperation of the public, state and local governments, and interstate and other regional agencies, as well as of the Federal agencies having programs affecting the coastal zone, in carrying out the purposes of this title;

(5) to encourage coordination and cooperation with and among the appropriate Federal, State, and local agencies, and international organizations where appropriate, in collection, analysis, synthesis, and dissemination of coastal management information, research results, and technical assistance, to support State and Federal regulation of land use practices affecting the coastal and ocean resources of the United States; and

(6) to respond to changing circumstances affecting the coastal environment and coastal resource management by encouraging States to consider such issues as ocean uses potentially affecting the coastal zone.

In Alabama, responsibility for administering the CZM Program is divided between the Alabama Department of Environmental Management (regulatory responsibility) and the Alabama Department of Conservation and Natural Resources, State Lands Division (CZM planning and grant management). Two major planning initiatives completed during the 1990's were the Coastal Wetlands Plan and the Coastal Access Plan.

State Agency Programs

Alabama Department of Conservation and Natural Resources

The Alabama Department of Conservation and Natural Resources is a multifunctional provider of resource based recreation sites and services, technical assistance, environmental education, law enforcement, research, preservation, land management including off-shore oil and gas exploration in state waters, and wildlife management. Its five operating divisions are State Parks, Wildlife and Freshwater Fisheries, Marine Resources, Marine police, and State Lands. It is the largest state supplier of outdoor recreation resources and services. The specific goals of DCNR regarding the outdoor recreation resource base are:

1. To enhance the quality of life by providing conservation leadership and to promote social, cultural and economic values relating to the state's recreational and natural resources.

2. To protect, enhance and promote utilization of Alabama's wildlife resources to meet the present and future consumptive and nonconsumptive demands.

3. To ensure all Alabamians access to quality outdoor recreation experiences and programs.

4. To facilitate balanced use of inland and coastal waters for recreational and commercial purposes.

5. To provide for public safety and resource conservation through education and enforcement.

State Parks Division
Alabama has one of the finest state park systems in the country. The 23 existing parks constitute a major segment of the recreational supply in Alabama. Location of these parks is such that at least one is within relatively easy traveling distance of the state's major urban centers.

Known for their beauty, these parks are as varied as the state's topography and offer a wide variety of activities. One can climb high mountains, descend deep canyons, enjoy beautiful lakes, or play on sparkling Gulf beaches. Recreational facilities in the parks include developed and primitive camping areas; convention centers, lodges and cabins; picnic areas, swimming pools, lake and Gulf swimming areas, golf courses, tennis courts, trails of all types, boat launching ramps, fishing areas, nature centers, and playgrounds.

Wildlife and Freshwater Fisheries Division
The mission of the Wildlife and Freshwater Fisheries Division is "to protect, conserve, and increase the wildlife of the state, and to administer all laws related to wildlife." The division's programs, which are most closely tied to outdoor recreation, are the Wildlife Management Area Program, the Nongame Program, the Public Fishing Lake Program and the Public Boating Access Program.

The Wildlife Management Area Program provides 34 areas in the state managed for public hunting. These areas provide recreational opportunities for a large number of resident and non-resident hunters. In addition to hunting, primitive camping, hiking, nature study and photography are available on these areas.

Most of the management areas are located on lands that are leased from other government agencies, corporations, or private individuals, with the state owning less than 5 percent of the land involved. Over the past few years, there has been a dramatic increase in the value of hunting leases on lands in Alabama. Thousands of acres have already been lost from the Wildlife Management Area Program as a result. If this program is to remain viable, the state will have to either purchase more land or provide sufficient incentives for corporate and private landowners to leave their lands in the program.

The objectives of the division's Nongame Wildlife Program are (1) to restore populations of wildlife species which have vanished or have been greatly reduced in Alabama during the last 50 years, (2) to provide the public with information on managing and attracting nongame wildlife, and (3) to provide public educational opportunities emphasizing the importance of nongame wildlife and its habitats. There are approximately 718 nongame wildlife species in Alabama. The primary source of funding for this program is a voluntary state income tax checkoff.

Restocking of predatory birds such as the bald eagle and osprey in several key areas of the state has been carried out under the Nongame Program. Additionally, projects to improve the status of the Eastern bluebird and the brown pelican and a backyard songbird program have been initiated. Assistance is also provided to the Parks Division on its bird rehabilitation efforts at the TreeTop Nature Trail in Oak Mountain State Park outside of Birmingham.

Through its public fishing lakes program the Game and Freshwater Fisheries Division manages 18 public fishing lakes and the fisheries resources of four state park lakes. These lakes have a combined surface area of over 2, 000 acres and offer high quality fishing experiences. Bass and bream are the primary fish caught; however, some of the lakes also have crappie and catfish.

The objective of the division's Public Access Area Program is to facilitate the use and enjoyment of Alabama's abundant public fishing and boating waters. Through this program, the Department has constructed over 100 access areas since 1958. Funding for the construction of these areas comes from fishing license revenues and federal excise taxes on fishing equipment.

Marine Resources Division

The Marine Resources Division is responsible for the protection and enhancement of Alabama's marine fishery resources. Responsibility for these resources is exercised through a variety of research, management, and enforcement activities. Activities of this division are an aid not only to the commercial fishing industry, but also to the recreational sport fishing industry. Programs of the division include a Fisheries Monitoring and Assessment Program, an Anadromous Fish Program, a Mariculture Program, and a Recreational Fishing Access and Enhancement Program.

Marine fisheries monitoring and assessment involves taking regular samples of fish populations throughout the coastal waters of Alabama. This sampling operation allows the division to monitor the immigration, distribution, growth, and abundance of marine fishes, shrimp, crabs, and oysters. This information is used to develop predictive indices needed to estimate the relative abundance of these resources. This information is in turn used to develop management programs, which rely primarily on regulation of the harvest.

The Anadromous Fish Program is a cooperative effort between Alabama and the State of Mississippi. Its objective is to hatch, rear, tag, and release striped bass in the coastal waters of both states. Since 1968, more than three million striped bass have been released for recreational sport fishing.

The Mariculture Program's objective is to research techniques designed to increase populations of important marine species through artificial propagation and release operations. Selected species are reared, tagged, and released and their growth, migration, and survival are monitored. Thus far the program has undertaken projects involving sea trout, red fish and certain species of shrimp.

Activities of the Recreational Fishing and Enhancement Program include a marine recreational creel survey and an artificial reef and boat ramp construction and maintenance program. The creel survey provides data on catch, fishing effort, expenditures, and sociological characteristics of fishermen. Boat ramp construction and maintenance improves access to the marine resource. The more than 40 artificial reefs constructed in the Gulf of Mexico greatly enhance both sport and commercial fishing in our coastal waters.

State Lands Division

The State Lands Division manages approximately 60,000 acres of State-owned lands that are not being used for specific purposes. This includes School Trust Lands, Mental Health Trust Lands and lands of other state institutions and agencies such as Auburn University, the University of Montevallo, several County Boards of Education, the Department of Corrections, the Department of Youth Services, the Department of Transportation and the Alabama Forestry Commission. The State Lands Division also manages approximately 600,000 acres of submerged lands, which includes statewide navigable water bottoms, coastal bays and offshore state waters for a distance of three miles.

The Alabama Natural Heritage Section is a program of the State Lands Division specifically charged with maintaining a current and historic understanding of the natural wonders of Alabama. It also provides support to Alabama's Forever Wild Program. The Natural Heritage Section's primary objectives are:

1) To develop and maintain a current inventory of plant and animal biological records of Alabama's species.

2) To conduct both preliminary and on-site assessments of nature preserve tracts being considered for acquisition by the Forever Wild Program.

3) To conduct life history studies of Alabama's flora and fauna that may provide information pertinent to their distribution, abundance, and management.

4) To conduct public outreach conservation programs on a regular basis.

The overall goal of the Natural Heritage Section is to function as a central depository for historic and current biological distribution records of species that occur within Alabama. The depository enhances conservation by supporting planning and operations of academic research, federal and state agencies, as well as developmental planning interests. Presently, the Natural Heritage Section Database has over 9,000 records cataloging the distribution of Alabama's biological species.

The Lands Division also manages the Forever Wild Program, which was established in 1992 to provide for the purchase of public recreation lands. Since its inception, the program has purchased lands for general recreation, nature preserves, and additions to Wildlife Management Areas and state parks. Currently, the Board is focusing on the acquisition of additional hunting lands. Five tracts located throughout the state have been acquired and seven additional tracts have been approved for acquisition.

1. ***THE MONSANTO TRACT*** in Marshall County consists of 209 acres near Lake Guntersville that is being managed as both an extension of Lake Guntersville State Park is providing a nesting habitat for the growing local population of Bald Eagles.

2. ***THE WEHLE TRACT*** in Bullock County consists of 1,565 acres that is being managed as enhanced habitat for both game and non-game species of wildlife. This property will be used for public recreation and a portion of it may ultimately be included in the adjacent Barbour County Wildlife Management Area. The State Lands Division operates the Wehle Nature Center on adjacent lands.

3. ***THE COON CREEK TRACT*** in Tallapoosa County consists of 320 acres that is being managed for public outdoor recreation, a nature preserve and environmental education. The on-site management of this tract is provided by a local volunteer group of natural resource agency representatives and private citizens interested in its benefits to area citizens.

4. ***THE GRAND BAY SAVANNA TRACT*** in Mobile County consists of a 2,733- acre nature preserve comprising a unique coastal wetland ecosystem. In addition to passive recreational use, the tract is utilized for educational and research purposes.

5. ***THE RIGGINS TRACT*** in Lowndes County consists of 624 acres being managed, along with other federal and state land acquisitions in the area, by the Game and Fish Division as the new Lowndes Wildlife Management Area for public hunting.

6. ***THE FORT TOULOUSE-MORTON TRACT*** in Elmore County consists of approximately 250 acres which will become an addition to Fort Toulouse Historic State Park. The property is the site where Creek Indian Chief Red Eagle surrendered to Andrew Jackson. There are earthen works including Indian mounds and military cooking ovens. The tract includes diverse vegetative types from first bottom river swamp to mixed pine-hardwood flats, an oxbow lake, beaver ponds, a man-made pond and a very large green field in a picturesque setting.

7. ***THE INDIAN MOUNTAIN-GREENE, -MISSISSIPPI VALLEY TITLE, -REED AND -WILLIS TRACTS*** in Cherokee County consist of 684 acres of land which will connect the Pinhoti Trail in the Talladega National Forest with the southern terminus of the Appalachian Trail in Georgia. The purchase of these four tracts is expected to invigorate interest in long distance hiking within the State of Alabama by both local residents and out-of-state visitors.

8. ***THE COLDWATER MOUNTAIN-LAWS and -KIMBERLY CLARK TRACTS*** on the outskirts of Anniston in Calhoun County consists of 3,158 acres which provide public access to beautiful mountain-top land for general recreation. Acquisition of this Tract is pending.

9. ***THE BLAKELY TRACT*** in Baldwin County adjoins the Historic Blakely State Park, site of the last Confederate battle.

Other State Agencies

Several other state agencies are involved in some manner in outdoor recreation. Their roles generally are not as involved as those agencies discussed previously; however, they do help shape the overall recreation picture in our state.

Alabama Historical Commission

Responsibility for preserving and safeguarding surviving evidence of the past lies with the Alabama Historical Commission, particularly historic structures, archaeological sites, and architectural landmarks. There are now 1,117 Alabama entries listed in the National Register of Historic Places, 32 of which are designated as National Historic Landmarks. Viewing these landmarks is a form of passive recreation that attracts many residents and tourists. Some sites offer other forms of recreation such as camping, picnicking, boating, fishing, and hiking. The Commission also helps coordinate the development of historical sites by other agencies.

Alabama Department of Transportation

The Alabama Department of Transportation provides access to recreational sites along state highways and provides picnic tables, rest areas, and welcome centers at several points throughout the state. The Department has also constructed several boat access areas as a part of its bridge construction and replacement program funded with Federal-Aid Highway Funds.

Transportation Enhancements

Since 1993, ALDOT has administered the Transportation Enhancements provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Equity Act for the Twenty-first Century (TEA-21)—authorized for the period 1998-2003. The Enhancements Program provides grants to state agencies and local governments to develop alternative transportation linkages throughout Alabama. ALDOT is currently preparing the state's bicycle-pedestrian plan which will blueprint the development of a state trails system.

Bicycle Transportation and Pedestrian Walkways

TEA-21 continues and expands provisions to improve facilities and safety for bicycles and pedestrians. The eligibility of NHS funds is broadened to include pedestrian walkways, and safety and educational activities are now eligible for TE funds. Other changes ensure the consideration of bicyclists and pedestrians in the planning process and facility design.

National Scenic Byways Program

TEA-21 authorizes a total of $148 million for technical assistance and grants to States for the purposes of developing scenic byway programs and undertaking related projects along roads designated as National Scenic Byways, All-American Roads, or as State Scenic Byways.

Congestion Mitigation and Air Quality Improvement

The Congestion Mitigation and Air Quality (CMAQ) Improvement program, continued in TEA-21 at a total authorized funding level of $8.1 billion for the 6 years of the Act, provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Eligible activities include transit improvements, travel demand management strategies, traffic flow improvements, and public fleet conversions to cleaner fuels, among others. Funding is available for areas that do not meet the National Ambient Air Quality Standards (nonattainment areas), as well as former nonattainment areas that are now in compliance (maintenance areas). Funds are distributed to States based on a formula that considers an area's population by county and the severity of its air quality problems within the nonattainment or maintenance area. Further, greater weight is given to carbon monoxide nonattainment and maintenance areas. Jefferson County is using CMAQ assistance to develop greenways including bicycle and pedestrian trails within the metropolitan area.

Tannehill Foundry and Furnace Commission

The Tannehill Commission is responsible for the development, operation, and maintenance of Tannehill State Historical Park. The centerpiece of the park is the Tannehill Furnace interpretive area which features an early iron ore furnace of the mid-1800s. Other recreational activities available at the park include hiking, camping, and swimming.

Alabama Battleship Commission

The Battleship Commission is responsible for developing and operating Battleship Park on Mobile Bay. The primary attraction is the USS Alabama, an official battleship of the U.S. Navy, which is now permanently anchored in Mobile Bay and is open for tours. Other attractions in the park include the USS Drum, a B-52 bomber, a World War II submarine, several aircraft of the era and an air museum. These attractions plus picnic tables with shelters and salt marsh ecological exhibits attracts numerous visitors each year.

Historic Blakely State Park

This park is the largest National Historic Register Site east of the Mississippi River encompassing 3,800 acres nestled beside the Tensaw River. Attractions include:

- Numerous Prehistoric Indian mounds
- Last major battle of the Civil War fought here at Fort Blakeley (5 1/2 miles of unspoiled breastworks where 26,000 soldiers met)
- 10.5 miles of magnificent nature trails, bicycle and horse paths
- The South's most beautiful Ghost Town - 1814 City of Blakeley

Bureau of Travel and Tourism

The objective of the Bureau of Travel and Tourism is to promote resident and nonresident travel. It does this primarily by disseminating information about recreational opportunities through the media and state welcome centers. These efforts are aimed at getting state residents to travel and vacation in-state and at attracting residents of other states. The travel and tourism industry is a valuable part of the state's economy.

Alabama Forestry Commission

The Alabama Forestry Commission operates three state forests and a forest education center. By contractual agreement with the Department of Conservation and Natural Resources, one forest tract is used as a state park and another as a state wildlife management area. The other forest tracts have some trails and support a limited amount of unstructured recreational use. Alabama has over 22 million acres of forestland. These forests provide valuable resources which directly affect the quality of life of every Alabamian. In addition to the wood products that we depend on every day, these same forests also provide habitat for wildlife, clean the air, purify water, protect valuable topsoil, and provide scenic beauty and recreational opportunities.

Recognizing both the economic and social importance of Alabama's forests and their multiple resources, the Alabama Forestry Planning Committee, made up of forestry and natural resource agencies and groups in the state, initiated the TREASURE Forest Program in 1974.

The TREASURE Forest program is a voluntary program that seeks to promote sound and sustainable, multiple-use forest management. This type of management encourages landowners to use their forests wisely to meet their own needs while at the same time protecting and enhancing the environment. The Forestry Commission is also actively involved in environmental education and a strong supporter of multiple-use forest management practices, which include recreation as a component.

Alabama Department of Economic and Community Affairs (ADECA)

ADECA is an umbrella agency for local government assistance programs including the Community Development Block Grant (CDBG) Program, Appalachian Regional Commission (ARC) Program, the Land and Water Conservation Fund (LWCF) Program, and the Recreational Trails Program (RTP). While outdoor recreation development is an eligible activity under all these programs, only the LWCF, and the RTP programs specifically address recreational needs. The LWCF program provides fifty percent matching grants to state agencies and local governments for the purpose of acquiring and/or developing outdoor recreation resources and carrying out a comprehensive outdoor recreation planning program. The RTP's assistance is limited to assisting federal, state, local and private organizations to acquire land and/or develop motorized and non-motorized trail resources. Due to program priorities, the ARC program does not play a significant role in addressing the state's recreational needs. The CDBG Program sets aside approximately $3 million per year for community enhancement activities that includes construction/renovation of outdoor recreation facilities, community centers, and senior citizens facilities in predominately low to moderate income areas.

Other state agencies which add to the rich diversity of recreational opportunity are the Mound State Monument near Tuscaloosa, the Alabama Space and Rocket Center in Huntsville, and the Historic Chattahoochee Commission.

Local Governments and Agencies

The provision of facility oriented recreational activities has been historically recognized as a responsibility of local government. Parks and recreational opportunity are public needs similar to police, fire or public works, which must be satisfied by expenditures of local funds, but aided by federal or state funds when available.

The term local government includes 426 incorporated cities and towns and 67 counties in Alabama. In addition, there are 128 public, county and city school boards that are independent of city and county government so far as ownership of property and independent "earmarked" sources of funds are concerned. Added to these are a few agencies that are "arms" of local governments such as; incorporated park boards that exercise independent action with respect to recreation. A large number of private schools in the state also have playgrounds and sports fields and operate recreational programs for enrolled students and, in a few instances, allow public use.

Each of the above agencies has the right and responsibility to plan and develop its own system of local parks, playgrounds, school grounds, or other recreational areas. Some have only a few "mini-parks" or other neighborhood and community parks, while others have developed city-wide or county-wide parks, and a few have large regional developments that are used by local residents and tourists. Many, however, have nothing beyond the school grounds developed by the city or county school boards.

Perhaps each local government should plan and develop its own system of recreational areas, because each has a need for some public recreational resources, either to serve its own population or to advance its economic welfare by attracting outside visitors. Most incorporated areas are limited in this respect by lack of an adequate funding base, due largely to their small size. Three fourths of the incorporated places in the state have less than 2,500 population and more than half of the counties are classified as rural, having no major cities.

The option of forming a city or county-wide recreational agency has been taken by six counties in the state and 90 municipalities. The result has been the delivery of efficient and effective recreational programs in their respective jurisdictions and such agencies have become strong advocates for increased recreation funding, professional development, and programs at the state level.

Private Sector Recreation

The private recreation sector is divided into two groups-private for profit and private nonprofit. The private for profit sector includes individuals, family businesses, partnerships, and various types of corporations. Examples include farm fish ponds operated on a fee basis, family operated riding stables, amusement parks, campgrounds, fresh and saltwater marinas, large apartment complexes, and the reservoirs developed by Alabama Power Company, an investor owned utility.

The private nonprofit sector includes agencies that are given tax-exempt status by federal tax authorities. Examples include Boy and Girl Scout groups, YMCA, YWCA, 4-H clubs, church and service clubs, employee clubs of industries, and membership clubs such as country clubs and hunting and fishing clubs.

Private recreation suppliers are important to the state's recreational system and are increasing in numbers. This sector, like the public sector, must accept certain responsibilities. Among these are (1) to provide quality recreational opportunities to users, (2) to protect the environment and resources used, and (3) to work with other sectors of the recreation community to insure that these goals are met throughout the state.

With its 11 reservoirs, the Alabama Power Company is the largest single private supplier of outdoor recreational resources and is, therefore, the most prominent of the private sector recreational providers. The company's lakes were built to generate hydroelectric power with dams located on the Warrior, Coosa, and Tallapoosa Rivers.

In addition to power generation, the reservoirs provide thousands of acres of water for all sorts of recreational activities including fishing, power boating, water skiing, sailing, and swimming. They have also provided a focal point for numerous land based recreational facilities such as Wind Creek State Park. Recreational use of the reservoirs developed rapidly after construction and continues to increase over the years. Much of the land owned by the company is also open for public hunting.

Another significant component of the private sector recreation providers is the commercial timber and paper industry. Lands owned by such corporations generally are open to the public for hunting on a permit fee or lease basis. Several of the wildlife management areas operated by the Wildlife and Freshwater Fisheries Division of the Department of Conservation and Natural Resources are located on corporate timber lands.

The backbone of the private sector recreational interests is small businesses, which make available a variety of recreational activities, some of *which* are found nowhere else. Canoe outfitters, campground, amusement park, and private botanical garden operators and marina operators are but a few of those included in this group.

Public/Private Sector Cooperation

Aside from passive cooperation (development of complementary as opposed to competing facilities and donations), there has been very little joint public/ private sector recreation activity in Alabama outside of the hunting and fishing activities noted above.

A major break with this trend occurred in 1990 when the Retirement Systems of Alabama (RSA) in concert with the Sunbelt Golf Corporation began planning for four world championship golf complexes. Each complex consists of three regulation 18 hole courses and one 18 hole par three course. The complexes, all designed by Robert Trent Jones, are located in Huntsville, Auburn/Opelika, Birmingham, and Mobile. Two smaller complexes (36 regulation holes and one 18 hole par three) are in Dothan and Greenville. Another development is under construction in the Shoals area, near Florence.

The complexes are located on land that is either donated by the private sector or provided by the local governments. In addition to adding to the supply of outdoor recreation resources, the complexes augment Alabama's tourism and retirees' initiatives and provide other spin-off benefits such as increased employment and development of golf-related businesses.

Due to the prevailing economic climate and state of intergovernmental assistance, opportunities for additional public/private sector ventures should be explored. However, it must be realized by elected and appointed officials that while such opportunities may exist, recreation historically has been and continues to be a public good. That is, the benefits extend to society as a whole and, in most cases, cannot be directly associated with activity participants.

CHAPTER IV
DEMAND FOR OUTDOOR RECREATION IN ALABAMA

Two different concepts of demand for outdoor recreation facilities and resources are used in this plan to aid in developing priority rankings for outdoor recreation needs in Alabama.

The first measure of demand used is that of estimated current and projected levels of participation in outdoor recreation, the traditional measure of demand used in past Alabama plans. Survey research data are used, with appropriate weights based on sample and population numbers of persons by age group, race group, and gender, to estimate numbers of persons participating and numbers of activity occasions by outdoor recreation activity. This measure provides a description of what has been taking place and can provide a description of what may take place in the future if it can be assumed that only the population will change - but not the participation rates within groups in the population. That is, participation analysis is of limited usefulness in gauging latent demand for specific outdoor recreation activities. This is of particular concern in rural areas of Alabama where participation is limited by the complete absence of many forms of outdoor recreation.

This chapter focuses on traditional participation analysis for Alabama for 1990 through 2020. The next chapter will include a section on measurement of perceived needs, a measure of latent demand for outdoor recreation facilities and resources previously used in other states.

During the winter of 1990, an extensive telephone survey of Alabama households was conducted resulting in 2,622 usable surveys and covering 7,583 persons (an average of 2.9 persons per household) of all age groups. All respondents were 19 years of age or older. Respondents were asked to indicate the number of members of the household and the age and gender of each household member. Respondents were then asked for estimates of the number of times during 1989 that each household member participated in each of a list of 32 outdoor activities. Respondents could ask other household members for information, and respondents could suggest additional outdoor recreation activities.

The survey data were weighted, based on sample numbers and population estimates by 9 age groups, 2 major race groups, and gender, to represent the entire state population and to obtain statewide estimates of numbers of persons participating in and numbers of activity occasions by outdoor recreation activity for the state. The survey data were also weighted by planning region, based on sample numbers and population estimates by age group, major race group, and gender, in order to obtain estimates of outdoor recreation participation by planning region. In addition, data were weighted to represent the populations of the metropolitan and nonmetropolitan areas of the state in order to estimate participation in these two area classifications. The survey data were also weighted based on population estimates through 2020 for the state and the planning regions.

This chapter discusses the estimates of outdoor recreation participation statewide and for the metropolitan and nonmetropolitan areas only. The participation estimates for the planning regions are contained in the appendices. The following paragraphs summarize the population estimates used in weighting the sample data in order to estimate statewide participation in outdoor recreation. Additional detailed data relative to both state and regional population estimates are presented in the appendices and the regional analysis chapter of this publication.

Projected Population by Components for Alabama

Actual 1990 census population was 4,040,587 with the 2000 census of Alabama estimated at 4,447,100 resulting in a 10.1 percent increase over the 1990 census estimate. The racial composition of the Alabama population was estimated to be approximately 26.4 percent nonwhite and 73.6 percent white in 2000. The gender composition of the Alabama population was estimated to be 51.7 percent female for 2000 and only slightly less (51.6%) in 1995. The age composition of the population of Alabama is shown in Table 4-1 for the year 2000. The median age of the state's population is 35.8 years. The age composition of the nonwhite population of the state differs substantially from that of the white population. The nonwhite population is, in general, younger than the white population and is projected to remain so.

Table 4-1. Population of Alabama residents by age group for 2000.

Age Group	Number	Percent
0 - 4	295,992	6.7
5 - 9	315,345	7.1
10 -14	320,252	7.2
15 -19	324,580	7.3
20 -24	306,765	6.9
25-34	603,015	13.6
35-44	685,512	15.4
45-54	600,209	13.5
55-59	225,450	5.1
60-64	190,082	4.3
65-74	316,748	7.1
75-84	195,749	4.4
Over 85	67,301	1.5

Source: U.S. Census Bureau, Census 2000.

PARTICIPATION

The research suggests that slightly less than 87 percent (86.9%) of individuals residing in Alabama participated in some form of outdoor recreation in 1989. The two most popular outdoor recreation activities for Alabama residents were walking for pleasure and fishing. Walking for pleasure was engaged in by 29 percent of the population in 1989 with an average of 152 times during the year, or 43 times per capita of the population. Fishing was engaged in by 29 percent of the population with an average of 45 times during the year, or 13 times per capita of the population.

Fishing includes freshwater and saltwater fishing and fishing from both shore (or bank) and boat. The percentage of Alabamians who engaged in freshwater fishing during 1989 was 27 percent, while the percentage who engaged in saltwater fishing was only 4 percent. Freshwater fishing from the bank attracted 17 percent of Alabamians, while 15 percent fished in freshwater from boats.

Hunting includes hunting for deer and turkey (big game), hunting for small game (quail, doves, rabbits, etc.), and waterfowl hunting. Deer and turkey hunting were the most popular type of hunting-attracting 8 percent of Alabamians.

Table 4-2 presents the estimated percentages of Alabama residents who engaged in selected outdoor recreation activities. These include all outdoor recreation activities in which 5 percent or more of the population is estimated to have engaged during 1989.

Table 4-2 Percentage of Alabama residents engaging in outdoor recreation by activity, 1989.

Activity	Percent
Walking	29
Fishing	29
Pool Swimming	21
Baseball & softball	12
Gardening	11
Saltwater beach	10
Hunting	10
Bicycling	9
Basketball	8
Camping (Developed Sites)	6
Power boating	6
Freshwater beach	5
Tennis	5
Trail hiking	5

Sources: Data based on an Alabama participation survey conducted by the Center for Business and Economic Services, Troy State University, during the winter of 1990.

Comparisons of outdoor recreation participation by each of the two genders indicated the following. For most of the outdoor recreation activities reported in the study, higher percentages of males (twice as many males as females in some cases) do engage in outdoor recreation than do females. There were only 5 activities in which higher percentages of females engaged than did males. Specifically, higher percentages of females engaged in each of the following activities: walking for pleasure (36% of females vs. only 20% of males), pool swimming (21% vs. 20%), gardening (12% vs. 9%), saltwater beach (just over 10% vs. just under 10%), and bicycling (just over 9% vs. just under 9%) .

The top 5 activities for participation by Alabama males were: freshwater fishing (bank) with 23 percent of males, freshwater fishing (boat) with 21 percent, walking for pleasure with 20 percent, pool swimming with 20 percent, and baseball and softball with 16 percent. The top 5 activities for participation by Alabama females were walking for pleasure with 36 percent, pool swimming with 21 percent, gardening with 12 percent, freshwater fishing (bank) with 12 percent, and saltwater beach with 10 percent (see Table 4-3).

Table 4-3. Comparison of Alabama statewide outdoor recreation participation rates by residents as measured by statewide surveys in 1985 and 1990.

Activity	**Percent of Residents Participating by Year**	
	1985	**1990**
Walking	38	29
Bicycling	11	9
Basketball	6	8
Pool swimming	8	21
Tennis	8	5
Freshwater fishing	*	29
Freshwater fishing (bank)	11	17
Freshwater fishing (boat)	13	15
Football	4	4
Boating	12	6
Freshwater power boating	*	5
Saltwater power boating	*	1
Saltwater beach	9	10
Hunting	9	10
Hunting deer and turkey	8.7	8
Golf	5	4
Off road vehicle riding	2	1
Freshwater beach	5	5
Horseback riding	3	3
Soccer	1	2
Picnicking	3	2
Volleyball	2	3
Developed camping	6	6
Trail hiking/backpacking	4	5
Saltwater fishing	2	4
Saltwater fishing (shore)	2.5	2
Primitive camping	2	3

*Comparative data not available

Sources: Alabama participation data for 1985 were based on data collected by Auburn University. Data for 1989 are based on an Alabama participation survey conducted by the Center for Business and Economic Services, Troy State University, during the winter of 1990.

Outdoor Recreation Participation Rates in Metropolitan and Nonmetropolitan Areas

Counties in the United States with sufficient population density may be designated as parts of metropolitan statistical areas. There are 20 such metropolitan counties and 47 nonmetropolitan counties in the state.

Table 4-4 The top 10 outdoor recreation activities engaged in by residents of Alabama's Standard Metropolitan Statistical Areas

Activity	Participation Percentage
Walking for pleasure	28
Fishing	27
Pool swimming	22
Saltwater beach activities	13
Baseball and/or softball	12
Bicycling	10
Gardening	10
Outdoor basketball	8
Hunting	8
Camping at developed sites	6

Twenty-seven percent of Alabamians participated in freshwater fishing with freshwater fishing from a boat (15%) occurring slightly more often than freshwater fishing from the bank (14%). Eighty-eight percent of the population in SMSA counties participated in some form of outdoor recreation.

Table 4-5 The top 10 outdoor recreation activities engaged in by residents of non-metropolitan counties

Activity	Participation Percentage
Fishing	31
Walking for pleasure	30
Pool swimming	19
Baseball and/or softball	12
Hunting	12
Gardening	12
Outdoor basketball	9
Bicycling	8
Saltwater beach activities	7
Camping at developed sites	6

Freshwater fishing was engaged in by 31 percent of residents of this type of area with freshwater fishing from the bank (20%) being more frequent than freshwater fishing from a boat (15%). Deer and turkey hunting (10%) was the most frequent form of hunting. Of nonmetropolitan residents, eighty-six percent (86%) participated in some outdoor recreation.

Outdoor Recreation Participation Rates by Those Classifying Themselves as Rural, Suburban, or Urban Area Residents

All Alabama residents surveyed by telephone were asked if they considered their residential location to be rural, suburban, or urban. Even though the U.S. Bureau of the Census classifies 60 percent of the state' s population urban (all those living in municipalities of 2,500 or larger population), results of the telephone survey indicate that 59 percent of Alabama residents consider themselves residents of rural areas, while 27 percent consider themselves urban residents, and 13 percent consider themselves suburbanites. Substantial differences in the percentages of persons participating in certain activities-primarily resource based activities-are estimated to exist. The weighted participation rate (in percent of residents) data by residence area type are shown in Table 4-6.

Table 4-6. Estimated percentages of residents participating in selected outdoor recreation activities by residence area type

Activity	Rural	Urban	Suburban
Gardening	12	6	11
Freshwater fishing (boat)	17	13	13
Freshwater fishing (bank)	20	11	13
Freshwater fishing	31	21	22
Fishing	33	22	24
Deer and turkey hunting	10	6	6
Small game hunting	6	3	2
Hunting	13	8	6
Walking for pleasure	29	23	31

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1989.

As one might expect, the largest differences in the participation rates are between those who classify themselves as rural and those who classify themselves as urban in residence area type. For the activities listed in the table above, differences in access to resources between the three groups probably explain much of the differences between the percentages by area type.

Participation in Alabama by Out of State Residents

Resources available for this project were not sufficient to permit a complete evaluation of the extent of participation in outdoor recreation in Alabama by out of state residents. Two portions of the study addressed this problem, however.

One portion used a telephone survey covering 1,170 residents of all out of state counties contiguous to Alabama to provide data, which was weighted in the statistical analysis by age group, race group, and gender, to provide estimates of participation in outdoor recreation by all residents of these counties. These out of state counties are regarded as particularly important because of past findings by other studies that people prefer to travel less than 2 hours in order to participate in most outdoor activities during the year and that those out of state persons living along the Alabama border are, therefore, the most likely to engage in outdoor recreation in Alabama regularly. The projected levels of activity by out of state residents in Alabama are substantial particularly for some activities. Since three of the 4 states bordering Alabama are projected to have higher population growth rates than Alabama for the foreseeable future, out of state demand and participation should increase over the next few years. The top 10 activities of out of state residents were walking for pleasure, bicycling, pool swimming, gardening, freshwater fishing from the bank, freshwater fishing from boats, outdoor basketball, baseball and softball, jogging, and tennis.

Another portion of this study was based on personal interviews with 514 persons at outdoor recreation destinations across the state. Most of those interviewed were out of state residents (374), but some were Alabama residents. Percentages of Alabama residents participating in particular activities did not differ sharply from percentages of out of state residents participating. No weighting of these data was possible because of a lack of accurate estimates of total numbers of out of state visitors to these facilities and a lack of resources to conduct a thorough study of visitors at both peak and off-peak times through the year.

CHAPTER V
OUTDOOR RECREATION NEED IN ALABAMA

The Alabama statewide comprehensive outdoor recreation plans in the past have utilized one measure of need for outdoor recreation facilities and resources-a comparison of the current supply of such facilities and resources, stated in annual numbers of activity occasions realizable based on current levels of these facilities and resources, with estimated levels of outdoor recreation activities (participation). This approach fails to consider activity demand in areas where recreation facilities do not exist (latent demand). Consequently, this plan uses perceived needs data in addition to calculated demand in identifying priority needs in Alabama.

To provide information on the availability of Alabama's outdoor recreation opportunities, the Alabama Department of Economic and Community Affairs (ADECA) maintained an inventory of recreational resources. However, the inventory has not been updated since 1990 and will need considerable attention before reliable data can be used in future planning initiatives. The activity analysis is based upon data contained in the 1990 inventory. This publication summarizes data collected by the Recreation Programs Section of ADECA and compiled by Auburn University's Economic Development Institute (EDI) in concert with the Department of Finance in the College of Business. All sample data were obtained from the Alabama SCORP research conducted by the Center for Business and Economic Services, Sorrell College of Business, Troy State University. Population projections through 2020 are derived from the Alabama Population Projections (2001) produced by the Center for Business and Economic Research, College of Commerce and Business Administration, University of Alabama.

This approach to evaluation of outdoor recreation supply and demand, called activity analysis, is not alone sufficient to evaluate outdoor recreation needs and desires which are presently simply not being met, i.e., latent demand.

Facilities and Resources Statewide

In order to obtain estimates of latent demand for outdoor recreation facilities and resources, respondents to all surveys were asked a number of questions related to latent demand and to certain outdoor recreation policy issues. This section will discuss the results of simply asking respondents, in the telephone survey of Alabama residents, for their assessments of the three greatest needs for outdoor recreation in their areas.

Table 5-1 presents estimated percentages of all Alabama adults, 19 years of age or older, by outdoor recreation need cited as either the greatest, second greatest, or third greatest need in their area for outdoor recreation. Note that the top 6 needs cited are for facilities or resources related to activities by individuals-sometimes called "passive recreation."

Table 5-1. Outdoor recreation needs most commonly cited by Alabama residents, 1990.

Activity	Percent
Swimming Pools	22
Walking/Jogging Trails	18
Parks & Land	17
Playgrounds	12
Bicycle Trails	12
Public Fishing Areas	7
Baseball Fields	7
Softball Fields	6
Picnic Areas	6
Tennis Courts	5
Golf Courses	5
Basketball Courts	5
Public Hunting Land	4
Maintain Environment	4
Camp Sites	3
Boating Facilities	2
Park Security	2
Hiking/Nature Trails	2
Soccer Fields	2
Youth Programs	2
Football Fields	2
Multipurpose Athletic fields	1

Based on first, second, and third response of greatest recreational need.

Special Populations

The most commonly cited perceived needs for outdoor recreation facilities and resources of the nonwhite race group differed from those of the general population in that larger percentages of the nonwhite group express such perceived needs and the percentages of this group expressing selected needs differed to such a degree that the ordinal ranking of the needs changed. The graph shows the outdoor recreation needs most commonly cited by the nonwhite population. The higher percentages of nonwhites expressing these perceived needs probably reflect both the frequently lower incomes of this group and less access to outdoor recreation facilities and resources.

Table 5-2 Outdoor recreation needs most commonly cited by nonwhite Alabama residents, 1990

Activity	Percent
Swimming pools	25
Parks and land	20
Playgrounds	16
Walking trails	13
Bicycle trails	12
Basketball courts	12
Softball fields	10
Baseball fields	8
Tennis courts	8
Public fishing areas	6
Picnic areas	6
Golf courses	4

Priority Classification of Perceived Outdoor Recreation Needs

In order to set priorities for outdoor recreation needs, the perceived needs of respondents have been classified as High, Low, or Moderate intensity based on the percentages shown in Figure 1. Needs classified as being of High intensity are those which were cited by at least a projected 10 percent of Alabama adults. Needs classified as being of Moderate intensity were those cited by at least a projected 5 percent of Alabama adults. Needs classified as being of Low intensity were those cited by less than a projected 5 percent of Alabama adults.

Priorities Needs in Alabama

The results of the classifications of perceived needs were then used together with the use classifications given earlier to arrive at priority ratings for outdoor recreation needs. This classification scheme was patterned after those used by the 1983 Tennessee State Comprehensive Outdoor Recreation Plan and by the 1989 Assessment and Policy Plan for Outdoor Recreation-Commonwealth of Kentucky, though it does differ from those plans in that estimated percentages of adults citing specific needs are used rather than a "need index" to determine latent demand classifications.

Discussion of High Priority Needs

Swimming pools With relatively high use of existing swimming pools and relating high percentages of all groups expressing perceived needs for additional swimming pools, this is an obvious priority need across the state. In rural areas and small towns, paying for construction and operation of swimming pools is likely to be the most serious barrier to development of additional public swimming pools. Indeed, several LWCF assisted swimming pools have closed since 1990 due to high operating and maintenance costs. An alternative to swimming pools for water-oriented recreation is the recent development of interactive water playgrounds. These facilities are relatively inexpensive to build and operate. Additional analysis will be needed to determine if swimming pool construction is a wise use of scarce LWCF funds.

Walking, jogging and nature trails Walking for pleasure accounted for the highest number of activity occasions of any activity through 2020 and tied with fishing for the largest percentage of Alabamians engaged in an outdoor recreation activity (29%). Walking for pleasure is enjoyed by Alabamians in rural, suburban, and urban areas and by all racial groups. It is very popular among senior citizens (over 45% of those aged 50 and older). Both the use ratio and the percentage of Alabamians expressing perceived needs for walking and jogging trails are relatively high. Non-trail walking presently accounts for most walking and jogging activity occasions. Park boards, city councils, and city and county recreation departments should study this type of activity, meet with participants, and study possible development of roadside and park walking/ jogging trails. In suburban areas, requiring neighborhood parks and sidewalks in housing developments can help to meet those needs. A good portion of non-trail walking and jogging will likely shift to developed trails if such become available. Nature trails can be particularly interesting in areas with diverse or unusual geology or vegetation.

Bicycle trails Both the use ratio and the percentage of persons expressing perceived needs for bicycle trails are relatively high. A portion of the mileage that is available is on multipurpose trails that are not well developed for bicycle use. Much of the bicycling in the state shares the right of way with other modes of transportation along existing roads and streets. With demand as high as it is, bicycle trails in parks and bike lanes or trails along city streets and highways would likely receive high use. One or more carefully selected pilot projects to build facilities and trails along major highways or abandoned railroad rights of way could provide a means of testing demand for long distance bicycle trails. A statewide bicycle plan would help to bring this issue into focus and should establish a state policy addressing bicycle access.

Hunting Hunting is one activity that does not lend itself well to analysis on a regional planning district basis. Hunters often travel long distances to hunt and may seldom hunt in their own planning district, particularly those who live in the more urban regions. As can be seen in the statewide needs table, there is enough land available in the state to meet the hunting demand. However, there may be a fallacy in this analysis in that a good portion of the land available for hunting is controlled by private clubs and not available to the public. On the other side of the equation, there are likely large amounts of private land, which are being or could be hunted, that are not reflected in the recreation supply inventory.

Playgrounds Generally, the most frequently expressed needs are related to outdoor recreation activities for which utilization of current facilities and resources is relatively high. Nevertheless, a need for more playgrounds is relatively high on the list of perceived needs for facilities and resources even though results of the same telephone survey indicate very low utilization of present playground space. These apparently contradictory results suggest 1) existing playgrounds do not meet user expectations 2) while playgrounds exist, they are designed primarily for older children (5-12 years of age), and 3) while there appears to be sufficient playground space, the distribution of that space is such that more playgrounds are desirable. In addition, there are different classes of playgrounds. A simple playground with swings and play equipment is vastly different from the complex playground structures designed to challenge physical and mental development of participants as well as their imagination. Finally, new equipment and playground products are being introduced constantly, with interactive water playgrounds becoming popular in smaller communities that do not have alternative water-based recreation opportunities. Further study is needed to accurately assess the demand for this recreation component.

Regardless of the reasons, real or imaginary, a significant proportion of the population believes that children should have more access to playgrounds. Much of the playground space is in school yards and, hence, not accessible by the public during much of the year-particularly for preschool age children. The perceived need for more playgrounds ties in well with other, more frequently expressed, perceived needs for walking trails, parks and land. More neighborhood parks and playgrounds could meet the needs in small and large cities.

Special Needs Considerations Considerable space has been devoted to developing data on land and facility needs for each of the 12 districts and for the State. The data considered total populations only and did not consider individuals and groups who merit special considerations. The basic land and facility needs do not provide much information on special needs of the disadvantaged, the handicapped, or the elderly. Consequently, other type studies and materials are drawn upon for discussions of these special needs.

Disadvantaged Needs Low-income people are handicapped in terms of being able to take advantage of a wide range of recreational opportunities that may be available 5, 10, or 20 miles away. Usually they cannot afford transportation to the areas, and often they cannot acquire the equipment needed to participate in some activities. Activities that require training or lessons are also beyond the incomes of these families. On the other hand, many of these families do not take advantage of the resources available to them. There is no quick remedy even for recreational problems, although there may be long-run solutions.

Education offers a partial solution. School programs from the earliest age on should emphasize participation in a wide variety of recreation activities and give the student an opportunity to participate in various forms of recreation. This should overcome some of the lack of "home" experience. Adult classes could be run in a number of ways, including by park and recreational board staffs, to acquaint and expose disadvantaged people to the values and enjoyment of outdoor recreation. Public transportation can help persons get to sites where various forms of recreation are available, but the person involved must be able to participate once he or she arrives. This fact strengthens the argument for public recreation resources as opposed to many private sector providers.

Handicapped Needs Approximately 5 percent of Alabama's people are physically handicapped. With mentally handicapped, disadvantaged, and other restraints added, as many as one out of five (20 percent) of the total population has some handicap that may limit full enjoyment of outdoor recreation. Most of these people have one thing in common, a need for education and instruction about recreation. In some cases, there is a need for transportation, and in others, there is a need for modification of existing facilities or provision of other facilities designed to fit special needs. Special programs or new approaches to old games will be needed in some cases to serve these people.

Needs of the Elderly Alabama's population currently has a 13 percent segment composed of people 65 years of age or older. Some of the 65 or older group actively participates in recreation, but others have never participated and need instruction and guidance. Often their need is for an active recreational program, not a passive one. Special equipment will be required for some, and transportation to recreational sites could pose a significant barrier to participation.

Participation In and Importance of Outdoor Recreation in Alabama

Statewide Demand/Needs

The most popular outdoor activity in Alabama is walking for pleasure (Table 5-3). Approximately 29% of the outdoor recreation participation is spent in walking with 168,798,498 activity occasions. With Alabama's temperate climate and bountiful outdoor treasures, residents and visitors take advantage of the opportunity to walk for pleasure.

Table 5-3 Statewide Activity Participation

ACTIVITY PARTICIPATION	PERCENT
Walking for Pleasure	29.00
Pool Swimming	23.90
Freshwater Fishing (bank)	18.80
Freshwater Fishing (boat)	17.90
Baseball/Softball	12.40
Saltwater Beach	12.10
Gardening	9.62
Bicycling	9.39
Deer and Turkey Hunting	8.93
Outdoor Basketball	8.12
Camping Developed Areas	8.07
Freshwater Power Boating	5.89
Diving for Pleasure	5.68
Trail Hiking	5.23
Tennis	4.96
Small Game Hunting	4.90
Visiting Historical Sites	4.47
Golf	4.31
Football	4.29
Camping Primitive Sites	4.17

Although a majority of Alabama's citizens participate in these twenty outdoor activities, they rank other activities as being the most important to them. This variance may be attributed to the lack of opportunity to participate in the activities that are most important to them. The top priority is auto racing (2.05), with swimming in saltwater (1.93) second, gardening (1.90) third, swimming in freshwater (1.87) fourth, and roller-skating (1.80) fifth. Additional study is needed to assess the causes of this variance.

Table 5-4 presents a list of activities ordered by their relative importance to survey respondents. It is interesting to note that skating did not appear as a significant activity when the participation survey was conducted in 1989, however, it was considered an important activity. In 2000 that importance measure has translated into significant demand for skate parks and trails assessable by skaters.

Table 5-4 Statewide Ranking of Outdoor Recreation Activities by Importance.

ACTIVITY	IMPORTANCE
Auto Racing	2.05
Swimming in Saltwater	1.93
Gardening	1.90
Swimming in Freshwater	1.87
Roller Skating	1.80
Walking for Pleasure	1.79
Attending Sports Events	1.73
Driving for Pleasure	1.71
Coaching softball/baseball	1.71
Visiting Historical Sites	1.70
Visiting Parks	1.67
Outdoor Basketball	1.66
Freshwater Fishing (bank)	1.64
Golf	1.63
Skateboarding	1.63
Bicycling	1.62
Picnicking	1.61
Pool Swimming	1.61
Tennis	1.61
Deer and Turkey Hunting	1.60

Table 5-5 Activities identified as most needed statewide

ACTIVITY	PERCENT
Public Swimming Pools	22.50
Walking/Jogging Trails	17.50
Parks/Land	16.90
Playgrounds	12.50
Bicycle Trails	12.50
Baseball Fields	6.80
Public Fishing Areas	6.30
Picnic Areas	6.20
Softball Fields	5.60
Tennis Courts	5.10
Golf Courses	4.60
Public Hunting Land	4.50

Another way of looking at priority need is with the “use ratio.” The use ratio is simply the total number of activity occasions projected for a given activity divided by the annual capacity of the existing supply (stated in terms of activity occasions). The size of the use ratio is then used to determine the use class (high, low, or moderate) based on a schema used in the publication Outdoor Recreation Activity Analysis and Needs Assessment Survey, 1984 developed by Dr. Ken Purcell, Murray State University, for the State of Kentucky. Use ratios of 0.70 or lower indicate "Low Use" for the related activity while use ratios of .71 to 1.80 indicate "Moderate Use", and use ratios above 1.80 indicate "High Use." Table 5-6 presents a state summary of priority rankings of recreation needs incorporating this useful indicator.

Table 5-6 Alabama state summary of priority rankings of outdoor recreation needs.

Outdoor Recreation Activity		Use Ratio	Use Class	Perceived Need Class	Needs Matrix Score	Priority Ranking
Beach	freshwater	8.46	High	Low	5	Medium
Beach	saltwater	1.99	High	Low	5	Medium
Boating		5.41	High	Low	5	Medium
Boating	freshwater ramps	6.02	High	Low	5	Medium
Boating	saltwater ramps	6.40	High	Low	5	Medium
Camping	developed	1.24	Moderate	Low	7	Low
Camping	primitive	0.35	Low	Low	9	Low
Courts	basketball	0.89	Moderate	Medium	4	Medium
Courts	tennis	1.09	Moderate	Medium	4	Medium
Courts	volleyball	1.04	Moderate	Low	7	Low
Fields	baseball/softball	0.67	Low	High	8	Low
Fields	football	1.52	Moderate	Low	7	Low
Fields	soccer	1.23	Moderate	Low	7	Low
Fishing	freshwater from bank	1.12	Moderate	Medium	4	Medium
Fishing	saltwater from shore	0.91	Moderate	Medium	4	Medium
Golf		1.05	Moderate	Medium	4	Medium
Hunting	big and small game	1.89	High	Medium	2	High
Hunting	waterfowl	8.58	High	Medium	2	High
Picnicking	tables	0.05	Low	Medium	8	Low
Swimming	pool	3.51	High	High	1	High
Trails	bicycle	5.71	High	High	1	High
Trails	horse designated	0.50	Low	Low	9	Low
Trails	horse undesignated	0.19	Low	Low	9	Low
Trails	nature	1.79	Moderate	High	3	High
Trails	ORV designated	3.45	High	Low	5	Medium
Trails	ORV undesignated	0.31	Low	Low	9	Low
Trails	walking	13.63	High	High	1	High
Playgrounds	developed	0.04	Low	High	6	Medium

DEVELOPING USE RATIOS TO ESTIMATE LOCAL DEMAND

Due to concentrations of recreation facilities in large urban areas, many rural areas of the state may not have access to particular type of recreational facilities while the regional analysis indicates that the existing supply meets or exceeds demand. To compensate for this situation, cities/counties may use the activity participation rate for the region in which they are located along with the carrying capacity standards presented below to calculate their own use ratios by using the following procedure/formula.

FORMULA:

$$\frac{\frac{Ca(ae+ap)}{P \times Ra} + \frac{Cb(be+bp)}{P \times Rb} + \ldots \frac{Cn(ne+np)}{P \times Rn}}{N}$$

Where:

Ca = Carrying Capacity
e = Activities Existing
p = Activities Proposed
P = Service Area Population
R = Per Capita Participation Rate
a = Activity "a"
b = Activity "b"
n = Activity "n"
N = number of Separate Activities

The following example will serve to clarify this procedure:

1. Determine Service Area Population (SAP)- Identify Potential Demand--Multiply the SAP by the appropriate Per Capita Participation Rate)
2. Demand must be calculated separately for each activity, i.e., baseball field, tennis court, etc.
3. Compute Existing Supply--Multiply the number of existing like activities within the service area by the Carrying Capacity for that activity.
4. Compute Proposed Supply--Multiply the number of like proposed activities by the appropriate carrying capacity and add the amount to the existing supply computed in 3 above.
5. Divide the proposed supply by the potential demand to arrive at the percent of population served. Each activity ratio (softball, tennis, etc.) must be calculated and analyzed separately. Any activity ratio that is greater than 130% of demand is not eligible for LWCF assistance and should be deleted from the project scope.

Determination of the service area is the key to successful application of this formula. Recreation activities have different service areas as do cities and counties. For example, a playground may only serve a neighborhood within a city while a golf course may address the demand for golf within an entire county.

Table 5-7 presents a list of carrying capacities for the most recognized outdoor recreation activities in Alabama.

Table 5-7 Annual Carrying Capacity Per Unit For Selected Recreation Activities

Activity	Unit Capacity	Unit	Turnover Rate Per Day	Season Length	Carrying Capacity Per Unit Per Year*
Saltwater Beach Activities	218	acre	2	180	78,480
Freshwater Beach Activities	218	acre	2	110	47,960
Boating	1	acre	2	150	300
Developed Camping	4	site	1	360	1,440
Primitive Camping	2	site	1	360	720
Freshwater Fishing (Boat)	0.1	acre	2	270	54
Freshwater Fishing (Shore)	0.2	foot	2	270	108
Saltwater Fishing (Boat)	0.1	acre	2	300	60
Saltwater Fishing (Shore/Pier)	0.2	shore/pier/foot	2	270	108
Hunting	0.02	acre	2	120	5
Off Road Vehicles	10	mile	4	270	10,800
Horseback Riding/Trails	8	mile	8	270	17,280
Walking Trails	50	mile	12	270	162,000
Backpacking/Hiking Trails	2	mile	4	270	2,160
Nature Trails	8	mile	6	270	12,960
Exercise/Jogging Trails	50	mile	12	270	162,000
Bicycle/Trails	20	mile	5	270	27,000
Golf	54	hole	3	270	43,740
Picnicking	4	table	2	240	1,920
Pool Swimming	0.04	sq.ft.	2	110	9
Baseball/Softball (Lighted)	22	diamond	4	180	15,840
Baseball/Softball (Un-lighted)	22	diamond	2	180	7,920
Soccer	24	field	4	120	11,520
Football	22	field	4	120	10,560
Track and Field	100	field	4	120	48,000
Tennis	3	court	8	270	6,480
Basketball	10	court	6	270	16,200
Volleyball	12	court	6	180	12,960

Source-ADECA 2003

* These figures were computed as follows: Carrying Capacity = Unit Capacity X Turnover Rate X Season Length

Race

These lists vary when addressing race, gender, age, and multiple simultaneous factors. For example, when examining importance for white Alabama citizens, the top five are auto racing (2.05), swimming in freshwater (2.03), swimming in saltwater (1.90), gardening (1.90), and walking for pleasure (1.79). The top five in participation are walking for pleasure (29.30), pool swimming (26.90), freshwater fishing (boat) (21.40), freshwater fishing (bank) (19.70), and saltwater beach (13.50). The most frequent participation in activities for nonwhite Alabama citizens includes walking for pleasure (28.60), baseball/softball (16.40), outdoor basketball (16.30), freshwater fishing (bank) (16.20), and bicycling (11.20).

Age

When examining participation and importance of outdoor activities by age groups, the physical condition and degree of passivity become significant. Younger people need and prefer to participate more in active recreation, while older people prefer activities that are more passive. A comparison of the participation and interests by age groups indicates these differences.

Table 5-8 Participation in Outdoor Recreation by Age Group

AGE GROUP	PARTICIPATION
0-8 years	1. Pool Swimming 2. Bicycling 3. Saltwater Beach 4. Baseball/Softball 5. Freshwater Fishing (bank)
9-18 years	1. Pool Swimming 2. Baseball/Softball 3. Outdoor Basketball 4. Bicycling 5. Freshwater Fishing (bank)
19-34 years	1. Walking for Pleasure 2. Pool Swimming 3. Freshwater Fishing (bank) 4. Freshwater Fishing (boat) 5. Baseball/Softball
35-54 years	1. Walking for Pleasure 2. Freshwater Fishing (boat) 3. Pool Swimming 4. Freshwater Fishing (bank) 5. Gardening
55 and beyond	1. Walking for Pleasure 2. Gardening 3. Freshwater Fishing (bank) 4. Freshwater Fishing (boat) 5. Driving for Pleasure

Regional Priorities

The recreational opportunities and therefore priorities vary by region in Alabama. Two presentations are used in this Chapter to portray recreational needs by region planning district. Table 5-9 summarizes the perceived needs for the state. Those perceived needs cited by a projected 10 percent of the regional population or more are classified as fitting in a high needs class(numerical values of 7-10); those cited by at least a projected 5 percent of the population are classified in to a medium needs class (numerical value of 3-6); and, those cited by less than 5 percent of the projected percentage of the population are classified into a low needs class (numerical values of 0-3).

Table 5-9 Perceived Needs Most Commonly Cited by Regional Planning District

	REGIONAL PLANNING DISTRICTS											
ACTIVITY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Baseball Fields	**3**	**3**	**3**	**2**	**2**	**4**	**3**	**3**	**3**	**2**	**2**	**2**
Beach Access					**1**			**1**				
Better Environmental Maintenance		**2**	**2**	**3**		**1**		**3**	**2**	**2**	**3**	**3**
Better Security		**1**		**1**								
Bicycle Trails	**6**	**4**	**5**	**4**		**3**	**3**	**6**	**4**	**7**	**5**	**6**
Boating Facilities		**1**					**1**	**1**			**2**	
Camp Sites		**2**		**1**	**2**							**1**
Football Fields									**1**		**2**	
Golf Courses	**3**	**1**	**1**	**2**		**1**		**2**	**3**	**2**	**1**	**3**
Hiking/Nature Trails					**3**		**1**					**1**
Multipurpose Athletic Fields				**1**		**1**						
Open Space Areas										**1**		
Outdoor Basketball Courts		**3**	**2**	**1**	**6**	**1**	**2**	**2**	**1**	**2**		
Parks/Land	**4**	**5**	**8**	**5**	**5**	**7**	**6**	**8**	**6**	**7**	**8**	**6**
Picnic Areas	**1**	**3**	**3**	**3**	**1**	**2**	**3**	**2**	**2**	**3**	**2**	**1**
Playgrounds	**5**	**5**	**5**		**5**	**6**	**5**	**5**	**4**	**4**	**4**	**3**
Public Fishing Areas		**1**	**3**	**3**	**2**	**2**	**4**	**3**	**2**	**3**	**2**	**2**
Public Hunting Land	**2**		**2**	**2**	**2**		**2**	**2**	**2**	**2**	**1**	**2**
Public Swimming Pools	**8**	**10**	**10**	**9**	**8**	**10**	**8**	**6**	**7**	**10**	**7**	**8**
Soccer Fields						**1**				**1**		
Softball Fields	**1**	**3**	**2**	**2**	**1**	**3**	**2**	**3**	**2**	**3**	**2**	**2**
Tennis Courts	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**3**	**2**	**2**	**2**	**2**
Walking/Jogging Trails	**6**	**7**	**7**	**6**	**4**	**5**	**5**	**7**	**9**	**9**	**8**	**7**
Youth Programs				**1**							**4**	

*Note: Not all activities will be identified as a need by every district. The activities are ranked 1-10 with 10 being the greatest perceived need.

Use of these data for planning purposes should be supplemented by broad based citizen participation at the local level.

Another useful tool in assessing regional demand is the following matrix which indicates which regions are meeting or exceeding the demand for specific outdoor recreation activities.

Table 5-10: Matrix of Activity Demand Exceeding Supply by Region

	REGIONAL PLANNING DISTRICTS											
ACTIVITY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Baseball-Softball			●			●				●		
Basketball		●	●			●			●	●		
Beach-Freshwater		●		●	●		●	●	●		●	●
Beach-Saltwater					●							
Bicycling	●	●	●		●	●	●	●	●	●		●
Boating			●		●		●		●	●		
Camping-developed sites		●	●							●		
Camping-primitive sites			●		●			●				
Fishing-Freshwater, Bank			●		●		●	●	●	●	●	
Fishing-Saltwater					●							
Football		●	●			●		●	●			
Golf										●		
Hiking			●		●			●	●	●	●	●
Horseback Riding	●	●	●		●	●	●	●	●		●	
Hunting-Big & Small	●		●	●			●	●	●		●	●
Hunting-Water fowl	●		●	●	●		●		●			●
Off Road-Developed	●	●	●		●			●		●		●
Off Road-Undeveloped	●	●	●		●	●		●	●	●		●
Pool Swimming	●	●	●	●	●	●	●	●	●	●	●	●
Saltwater Beach					●							
Skating			●		●	●		●	●			
Soccer		●	●	●	●	●		●	●		●	●
Swimming-Lake									●	●		
Tennis			●			●	●			●		
Volleyball		●		●	●	●	●		●		●	●
Walking/jogging	●	●	●	●	●	●	●	●	●	●	●	●

● = Demand exceeds supply.

Participation Rates

Participation data is presented for each of the twelve planning and development regions identified in Figure 1. This information, in collaboration with an inventory of existing opportunities in the region, should provide a solid basis for planning and developing outdoor recreation activities to meet the needs of the population resident in that region.

Table 5-11 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Northwest Alabama Council of Local Governments Planning District 1, 1990.

Table 5-11 Estimated Resident Participation with Per Capita Participation Rate for Region 1

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	30.1	50.6
Pool swimming	20.2	11.3
Freshwater fishing (bank)	18.0	6.6
Freshwater fishing (boat)	16.3	5.7
Bicycling	10.7	10.0
Gardening	10.6	11.5
Baseball/softball	9.9	4.8
Freshwater beach	9.4	2.9
Deer and turkey hunting	8.8	2.7
Saltwater beach	7.5	11.9
Outdoor basketball	6.9	2.4
Freshwater power boating	5.8	11.1
Trail hiking	5.6	0.8
Camping developed sites	5.2	0.7
Camping primitive sites	4.4	0.5
Golf (9 hole rounds)	4.2	2.0
Horseback riding	4.0	4.5
Volleyball	3.7	1.1
Football	3.7	0.9
Small game hunting	3.4	1.2
Swimming in freshwater	3.4	2.3
Jogging	2.7	3.4
Saltwater fishing (boat)	2.6	0.7
Tennis	2.5	1.6
Water skiing	2.4	1.0
Driving for pleasure	2.3	0.8
Visiting historical sites	2.3	0.3
Canoeing/rafting	1.6	1.0
Riding off-road vehicles	1.4	1.1
Soccer	1.2	0.4
No outdoor recreation	11.3	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-12 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the West Alabama Planning and Development District 2, 1990.

Table 5-12 Estimated Resident Participation with Per Capita Participation Rate for Region 2

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	32.5	38.8
Pool swimming	25.1	13.4
Freshwater fishing (boat)	16.3	4.7
Baseball/softball	15.8	6.8
Freshwater fishing (bank)	14.2	4.0
Gardening	12.2	7.4
Outdoor basketball	11.7	10.0
Bicycling	11.4	9.7
Deer and turkey hunting	9.5	2.7
Camping developed sites	8.0	1.5
Saltwater beach	7.2	0.4
Freshwater beach	6.7	1.8
Freshwater power boating	6.6	1.0
Tennis	5.7	2.1
Small game hunting	5.6	1.7
Football	5.4	2.8
Jogging	3.9	3.2
Golf (9 hole rounds)	3.8	1.1
Trail hiking	3.8	1.2
Driving for pleasure	3.4	0.5
Volleyball	3.4	0.9
Water skiing	3.1	1.1
Camping primitive sites	2.1	0.3
Visiting parks	2.0	0.4
Horseback riding	1.9	0.7
Canoeing/rafting	1.6	0.1
Picnicking	1.6	0.1
Saltwater fishing (boat)	1.4	0.3
Soccer	1.1	0.3
No outdoor recreation	12.8	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-13 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Birmingham Regional Planning District 3, 1990.

Table 5-13 Estimated Resident Participation with Per Capita Participation Rate for Region 3

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	31.8	43.8
Pool swimming	22.4	8.3
Freshwater fishing- (boat)	15.0	4.5
Freshwater fishing (bank)	14.9	5.1
Baseball/softball	13.1	7.0
Gardening	12.3	10.1
Bicycling	11.3	13.8
Saltwater beach	10.1	0.4
Camping developed sites	9.0	0.8
Outdoor basketball	8.3	5.1
Trail-hiking	7.9	1.7
Freshwater beach	7.4	1.5
Tennis	5.9	4.1
Freshwater power boating	5.4	2.1
Deer and turkey hunting	5.4	1.0
Visiting historical sites	4.7	0.3
Football	4.6	2.8
Jogging	4.4	5.3
Driving for pleasure	3.9	1.0
Volleyball	3.9	0.6
Camping primitive sites	3.5	0.2
Golf (9 hole rounds)	3.4	2.4
Visiting parks	3.0	0.8
Horseback riding	2.9	1.5
Small game hunting	2.3	0.6
Saltwater fishing (boat)	2.2	0.2
Soccer	1.9	0.8
Picnicking	1.7	0.3
Canoeing/rafting	1.6	0.1
Water skiing	1.6	1.0
Saltwater fishing (shore)	1.4	0.1
Visiting playgrounds	1.2	1.1
Visiting zoos	1.1	0.0
Riding off-road vehicles	1.1	0.4
Saltwater power boating	1.1	0.3
No outdoor recreation	9.5	--

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-14 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the East Alabama Regional Planning and Development District 4, 1990.

Table 5-14 Estimated Resident Participation with Per Capita Participation Rate for Region 4

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	27.6	45.9
Pool swimming	24.2	9.2
Freshwater fishing (bank)	21.2	7.1
Freshwater fishing (boat)	19.0	9.9
Baseball/softball	13.3	6.0
Gardening	12.8	13.5
Deer and turkey hunting	11.9	2.5
Saltwater beach	10.1	0.9
Bicycling	9.2	13.8
Outdoor basketball	9.0	6.2
Small game hunting	7.6	1.8
Camping developed sites	7.1	0.6
Freshwater power boating	6.9	2.5
Volleyball	5.5	1.6
Camping primitive sites	5.2	0.3
Freshwater beach	4.7	1.1
Trail hiking	4.7	1.5
Jogging	4.2	5.7
Tennis	3.4	1.9
Golf (9 hole rounds)	3.0	2.1
Football	2.8	1.6
Riding off-road vehicles	2.5	2.1
Visiting parks	2.4	0.2
Saltwater fishing (shore)	2.3	0.4
Horseback riding	2.2	0.8
Water skiing	2.1	0.5
Driving for pleasure	1.8	0.5
Attending sports events	1.5	0.2
Saltwater fishing (boat)	1.3	0.2
No outdoor recreation	10.6	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-15 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the South Central Alabama Development District 5, 1990.

Table 5-15 Estimated Resident Participation with Per Capita Participation Rate for Region 5

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	25.4	38.2
Freshwater fishing (bank)	16.6	5.2
Pool swimming	15.4	7.1
Freshwater fishing (boat)	11.2	3.1
Outdoor basketball	11.0	7.5
Baseball/softball	10.2	5.7
Deer and turkey hunting	9.4	3.9
Gardening	9.2	5.1
Bicycling	5.9	5.9
Saltwater beach	5.7	0.1
Small.game hunting	4.7	2.1
Saltwater fishing (boat)	3.5	0.4
Freshwater power boating	3.2	0.5
Jogging	2.9	2.4
Camping developed sites	2.8	0.1
Football	2.1	1.0
Picnicking	2.0	0.2
Camping primitive sites	1.8	0.3
Horseback riding	1.6	3.0
Saltwater fishing (shore)	1.5	0.1
Trail hiking	1.5	0.5
Volleyball	1.4	0.6
Tennis	1.4	1.9
Soccer	1.4	2.2
Golf (9 hole rounds)	1.2	0.6
No outdoor recreation	18.7	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-16 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Alabama Tombigbee Regional Commission 6, 1990.

Table 5-16 Estimated Resident Participation with Per Capita Participation Rate for Region 6

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	37.8	57.9
Freshwater fishing (bank)	20.9	7.8
Gardening	17.7	18.5
Outdoor basketball	17.5	10.8
Pool swimming	16.0	9.2
Baseball/softball	13.9	5.8
Freshwater fishing (boat)	12.4	4.9
Deer and turkey hunting	11.4	3.7
Bicycling	9.9	11.0
Small game hunting	7.2	1.9
Saltwater beach	6.9	0.6
Tennis	6.1	4.8
Football	5.6	3.1
Volleyball	4.8	1.7
Freshwater power boating	3.4	1.2
Trail hiking	3.1	0.7
Saltwater fishing (shore)	2.7	0.4
Jogging	2.6	3.0
Camping developed sites	2.5	0.2
Riding off-road vehicles	2.5	2.1
Horseback riding	2.4	2.9
Saltwater fishing (boat)	2.3	0.3
Golf (9 hole rounds)	1.9	1.4
Freshwater beach	1.6	0.4
Driving for pleasure	1.4	0.1
Camping primitive sites	1.3	0.1
Saltwater power boating	1.2	0.1
Visiting parks	1.1	0.1
No outdoor recreation	16.1	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-17 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Southeast Alabama Regional Planning and Development District 7, 1990.

Table 5-17 Estimated Resident Participation with Per Capita Participation Rate for Region 7

Activity	Percent of Residents Participating	Per Capita Participation Rate
Pool Swimming	26.1	9.9
Walking for pleasure	25.3	40.0
Freshwater fishing (bank)	23.9	12.0
Freshwater fishing (boat)	18.1	7.4
Saltwater beach	13.8	1.7
Baseball/softball	10.3	7.3
Deer and turkey hunting	10.1	2.8
Bicycling	6.6	8.1
Golf (9 hole rounds)	6.2	2.5
Tennis	6.1	3.6
Small game hunting	5.6	1.7
Gardening	5.6	3.8
Horseback riding	5.5	3.7
Freshwater beach	5.2	1.6
Outdoor basketball	5.1	4.3
Camping developed sites	4.9	0.9
Saltwater fishing (boat)	4.6	1.2
Jogging	4.2	5.8
Football	4.0	2.0
Driving for pleasure	3.1	2.2
Water skiing	3.0	1.2
Saltwater fishing (shore)	2.9	0.5
Canoeing/rafting	2.6	1.0
Trail hiking	2.4	3.0
Camping primitive sites	2.4	0.1
Picnicking	2.3	0.6
Freshwater power boating	1.7	1.3
Water fowl hunting	1.6	0.2
Saltwater power boating	1.5	0.9
Riding off-road vehicles	1.4	0.5
Visiting parks	1.3	0.2
Soccer	1.2	1.0
Snow skiing	1.0	0.0
No outdoor recreation	10.4	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-18 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the South Alabama Regional Planning District 8, 1990.

Table 5-18 Estimated Resident Participation with Per Capita Participation Rate for Region 8

Activity	Percent of Residents Participating	Per Capita Participation Rate
Saltwater beach	18.7	5.9
Walking for pleasure	17.5	27.9
Pool swimming	12.9	7.6
Freshwater fishing (boat)	11.1	5.4
Baseball/softball	10.9	5.1
Freshwater fishing (bank)	7.9	3.5
Deer and turkey hunting	7.8	2.1
Outdoor basketball	7.2	7.0
Saltwater fishing (boat)	6.9	2.9
Gardening	6.7	5.1
Camping developed sites	5.8	0.3
Bicycling	5.7	7.9
Freshwater power boating	4.9	1.2
Saltwater fishing (shore)	4.4	4.6
Freshwater beach	4.2	4.5
Tennis	4.0	2.0
Camping primitive sites	3.8	0.6
Saltwater power boating	3.6	2.2
Golf (9 hole rounds)	3.0	1.8
Small game hunting	3.0	1.0
Football	2.8	3.5
Trial hiking	2.7	1.0
Horseback riding	2.3	0.6
Volleyball	2.0	0.8
Driving for pleasure	1.9	1.0
Visiting parks	1.7	0.3
Jogging	1.5	1.7
Visiting historical sites	1.4	0.1
Soccer	1.3	1.4
No outdoor recreation	17.8	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-19 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Central Alabama Regional Planning and Development District 9, 1990.

Table 5-19 Estimated Resident Participation with Per Capita Participation Rate for Region 9

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	29.3	52.5
Pool swimming	23.0	9.4
Freshwater fishing (bank)	20.6	7.8
Freshwater fishing (boat)	20.6	7.8
Saltwater beach	15.6	0.7
Baseball/softball	11.3	5.2
Bicycling	11.2	13.3
Outdoor basketball	9.2	5.9
Deer and turkey hunting	8.6	2.2
Gardening	8.3	9.9
Jogging	6.2	8.1
Freshwater power boating	5.6	1.5
Football	4.9	2.0
Camping developed sites	4.3	0.2
Golf (9 hole rounds)	4.3	2.1
Small game hunting	4.2	0.8
Tennis	3.9	1.1
Visiting parks	3.9	0.3
Freshwater beach	3.9	1.1
Volleyball	3.7	0.4
Driving for pleasure	3.3	1.6
Trail hiking	3.3	1.1
Saltwater fishing (boat)	3.2	0.4
Water skiing	3.0	0.8
Visiting zoos	3.0	0.1
Camping primitive sites	2.9	0.1
Saltwater fishing (shore)	2.8	0.2
Picnicking	2.4	0.1
Soccer	2.0	1.5
Swimming in freshwater	1.8	1.0
Visiting historical sites	10.0	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-20 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Lee-Russell Council of Governments Planning District 10, 1990.

Table 5-20 Estimated Resident Participation with Per Capita Participation Rate for Region 10

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	27.0	40.7
Pool swimming	17.4	6.2
Baseball/softball	11.3	5.0
Freshwater fishing (boat)	9:1	2.4
Tennis	8.3	8.5
Gardening	7.9	4.7
Freshwater fishing (bank)	7.6	2.6
Football	7.0	2.5
Bicycling	6.9	7.4
Deer and turkey hunting	5.9	1.2
Outdoor basketball	5.8	8.2
Jogging	5.7	8.3
Golf (9 hole rounds)	3.8	1.8
Small game hunting	3.5	0.8
Trail hiking	3.2	0.6
Saltwater beach	3.2	0.4
Freshwater power boating	3.0	0.9
Camping developed sites	2.5	0.1
Saltwater fishing (boat)	2.1	0.5
Freshwater beach	2.1	0.4
Driving for pleasure	2.0	1.4
Volleyball	1.7	0.4
Picnicking	1.4	0.1
Water skiing	1.4	0.7
Attending sports events	1.2	0.1
Snow skiing	1.2	0.1
Riding off-road vehicles	1.1	1.3
No outdoor recreation	17.1	--

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-21 Estimated percentages of the resident population participating in and estimated per capita participation rates for selected outdoor recreation activities in the North Central Alabama Regional Planning District 11, 1990.

Table 5-21 Estimated Resident Participation with Per Capita Participation Rate for Region 11

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	28.6	45.7
Freshwater fishing (bank)	20.7	6.2
Pool swimming	19.8	8.3
Freshwater fishing (boat)	17.7	5.7
Baseball/softball	15.3	6.9
Gardening	10.5	7.7
Saltwater beach	9.0	0.8
Deer and turkey hunting	8.2	1.7
Bicycling	8.1	5.4
Camping developed sites	7.2	0.6
Trail.hiking	6.8	1.3
Freshwater beach	6.2	2.1
Outdoor basketball	6.2	2.0
Driving for pleasure	5.3	3.0
Golf (9 hole rounds)	5.2	2.2
Freshwater power boating	4.2	1.0
Tennis	3.7	1.2
Football	3.7	1.0
Small game hunting	3.6	1.0
Visiting historical sites	3.3	1.4
Volleyball	3.1	1.2
Canoeing/rafting	2.6	0.2
Horseback riding	2.1	0.6
Camping primitive sites	1.9	0.1
Water skiing	1.6	0.2
Riding off-road vehicles	1.6	0.2
Saltwater fishing (boat)	1.2	0.1
Soccer	1.2	0.4
Jogging	1.1	2.1
No outdoor recreation	12.9	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

Table 5-22 Estimated percentages of the resident population participating in and per capita participation rates for selected outdoor recreation activities in the Top of Alabama Regional Planning District 12, 1990.

Table 5-22 Estimated Resident Participation with Per Capita Participation Rate for Region 12

Activity	Percent of Residents Participating	Per Capita Participation Rate
Walking for pleasure	30.8	46.7
Pool swimming	21.9	8.9
Freshwater fishing (bank)	15.4	4.8
Freshwater fishing (boat)	15.0	5.8
Gardening	12.9	9.7
Baseball/softball	10.9	3.8
Bicycling	10.3	11.5
Camping developed sites	7.6	1.6
Deer and turkey hunting	7.3	1.9
Freshwater power boating	7.3	2.1
Trail-hiking	6.7	1.3
Outdoor basketball	5.9	3.7
Golf (9 hole rounds)	5.6	1.9
Small game hunting	5.3	1.2
Saltwater beach	4.7	0.3
Camping primitive sites	4.5	1.0
Freshwater beach	4.3	1.0
Tennis	4.2	1.8
Horseback riding	3.7	2.5
Water skiing	3.7	1.0
Jogging	3.2	2.3
Volleyball	3.2	1.0
Football	2.5	0.9
Picnicking	2.1	0.2
Visiting historical sites	1.8	0.1
Saltwater fishing (boat)	1.6	0.1
Swimming in freshwater	1.5	1.0
Riding off-road vehicles	1.4	1.5
Snow skiing	1.4	0.2
Saltwater fishing (shore)	1.3	0.1
Canoeing/rafting	1.1	0.1
Soccer	1.0	0.2
No outdoor recreation	13.8	---

Source: Projected from telephone survey data collected by the Center for Business and Economic Services, Sorrell College of Business, Troy State University, Troy, Alabama, during the first quarter of 1990.

CHAPTER VI
ALABAMA RECREATION ACTION PROGRAM

Introduction

The Action Program is prepared in compliance with Chapter 600.5 and 630.1 of the Land and Water Conservation Fund Grants Manual. This plan contains seven issues which are considered to be the highest priorities to be addressed during the period January 1, 2003-January 1, 2005. Recreation planning is a dynamic process and as such, issues and goals will change over time as factors within the planning environment change and as the public's perception of recreation changes. However, it should be noted that the many of the previous issues addressed in the SCORP are as valid today as they were when first identified. Frequently the only change is their priority in relation to other issues identified for consideration. Thus, this plan should be viewed as an extension of previous planning efforts.

Organization

The Alabama Department of Economic and Community Affairs (ADECA) assumed responsibility for administering the Land and Water Conservation Fund Program in April 1988. ADECA serves as the State's single point of contact for much of the financial and technical assistance available to assist local governments with their infrastructure needs. At present, the Recreation Programs Section is attached to the Director's office. A current organizational chart follows.

Issue Assessment

The issues identified previously were derived from the perceived needs survey, input from the Alabama Recreation Resource Planning Council which included broad based representation from federal, state and local resource managers, and consumer groups; previous SCORP documents; and, numerous meetings with recreation providers and consumers since 1995. The following priorities resulted from ADECA's assessment of the information gathered from all sources.

Priorities

Acquisition Priorities

1. Acquisition of urban open space including land for greenways or other linear or connecting park lands.
2. Acquisition of unique natural resources areas such as wetlands, saltwater beach, urban waterfront, National Natural Landmarks, and state designated unique natural or scenic areas that are capable of sustaining light to moderate recreation use.
3. Abandoned railroad rights of way.
4. Acquisition of park land in incorporated areas where there are no recreation facilities.

Development Priorities

1. Passive or unstructured outdoor recreation facilities in areas where the existing supply does not adequately address existing resident and non-resident demand (based on SCORP needs data). Passive recreation includes such activities as picnic facilities, neighborhood playgrounds, and open playfields. Unstructured outdoor recreation facilities may include softball fields, basketball courts, tennis courts, or similar facilities where the primary object is to provide basic recreation for non-tournament use.
2. Saltwater beach access areas and support facilities.
3. Projects where handicap access is the primary objective. For example, bank or pier fishing areas, playgrounds, interpretive trails, etc.

4. Walking, bicycling, hiking, and ATV/ORV trails. It should be noted that ADECA also administers the Recreational Trails Program which receives approximately $1 million per year for motorized and non-motorized trail development. Consequently, while a state priority, trail acquisition or development will not be assisted by the LWCF program.
5. Water access areas for canoeing and rafting.
6. Renovation of existing facilities that have deteriorated because of age or overuse. Facilities that have not been adequately maintained are ineligible for assistance.
7. Age appropriate playgrounds.

National Issues

1. The most pressing national issue is the continuation of the Land and Water Conservation Fund Program and its restoration to full funding as authorized by the LWCF Act of 1965. Too many opportunities are being lost and there are entirely too many areas of Alabama that do not have recreation facilities in sufficient quantity or quality to sustain viable recreation programs.
2. Since 1993, the Surface Transportation Act has required that ten (10%) of its appropriations to the states be expended on transportation enhancements. This program has been instrumental in the acquisition/development of pedestrian and bicycle paths and the development of greenways. In addition, the Surface Transportation Act included an appropriation for the Recreational Trails Program which has assisted with the construction of over 120 motorized and nonmotorized trails throughout Alabama. Given that walking is the state's most popular recreation activity and the significant deficiency in recreational trails in every region of the state, these initiatives should be continued.

CHAPTER VII
STATE WETLAND PLAN

Legal Authority
The Federal Emergency Wetlands Resources Act of 1986 was enacted "To promote the conservation of migratory waterfowl and to offset or prevent the serious loss of wetlands by the acquisition of wetlands and other essential habitat..." Section 303 of the this Act requires the states to incorporate wetlands planning within their State Comprehensive Outdoor Recreation Planning processes.

Definition
The Emergency Wetlands Resources Act, defines wetlands as being:

> …land that has a predominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

Hydric soil is defined as

> "…soil, that, in its un-drained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation (a plant growing in water or a substrate that is periodically deficient in oxygen during a growing season as a result of excessive water content).

Significance of Wetlands
Alabama's wetlands are an integral part of the ecosystem however, wetlands have just begun to be appreciated for their significance and benefits, but not before about half have been destroyed or converted for other uses. Alabama has lost 50 percent of its wetlands in the last 200 years (Dahl, 1990). Wetlands in Alabama once covered 7.6 million acres and recent estimates of existing wetlands are around 3.1 million acres (U.S. Fish and Wildlife Service, 1992). The USDA Natural Resources Inventory indicates 3,670,100 ares of wetlands in AL on nonfederal lands with 1,502 acres of prior converted wetlands enrolled in the Wetland Reserve Program. The intrinsic values of wetlands were not recognized until their loss started to reveal problems. For example, sportsmen gradually began to notice a decline in the numbers of fish and wildlife. Flooding along rivers and shorelines increased over historical levels, water pollution control and groundwater recharge was becoming more difficult. With this recognition has come an expanded interest in protection, conservation, and management of Alabama's remaining wetlands.

Identifying the wetlands in Alabama and gaining an understanding of their importance will not only enhance plant life, wildlife, but also human life. Wetlands make up about 10 percent of Alabama and range from very small areas (less than an acre) to very large areas of 100,000 acres or more. Wetlands can range from being wet all year around to just being wet partially during the year, they can be vegetative or non-vegetative.

Wetlands are a valuable resource because they do so much to enhance the quality and quantity of the environment around them such as:

- Providing an important nesting, breeding, nursing, and feeding grounds for many species of fish, birds, and other wildlife
- Providing migratory waterfowl an ideal resting-place
- Providing a vital habitat for rare and endangered plants and animals
- Providing a reduction of flood stages by stabilizing banks and assisting with erosion control

- Helping to improve water quality by slowing water flow, and filtering pollutants
- Providing economic opportunities through commercial fishing, shell fishing, and trapping
- Providing recreational opportunities; camping, canoeing, hunting, fishing, hiking, bird watching, photography, etc.
- Providing an educational hands-on research classroom for many people

History of Declining Alabama Wetlands

In order to effectively plan for the protection, conservation, and management of wetlands it is important to know the history of the wetlands in Alabama and to identify those contributing factors that led to their decline. Between 1956 and 1979 Alabama lost approximately 10 percent of its interior wetlands primarily because of agricultural conversion of wetlands to croplands, conversion of bottom-land-hard wood forests to pine culture and inundation caused by reservoir construction (USFWS, 1992). During the same time period 69 percent of its coastal freshwater marshes and 29 percent of its estuarine marsh were lost due to industrial and commercial development, residential development, erosion and subsidence and the natural succession from wetlands to uplands (Roach, 1987). According to Watzin in the Alabama Sea Grant Consortium Publication, the cumulative effects of alterations of all kinds on the Mobile Bay ecosystem resulted in a loss of more than 10,000 acres of emergent estuarine marsh and probably more than 50 percent of the submerged aquatic vegetation in the bay between 1955 and 1979.

An evaluation by the USFWS revealed that between 1979 and 1988 there were no additional losses of estuarine-marsh acreage and there was a 75 percent increase in freshwater marsh that was attributed to growth of emergent vegetation in disposal areas and ditches and perhaps errors in previous inventories. There were about 1,200 acres of forested wetlands in the Mobile Bay area that were lost or converted to scrub-shrub wetlands during this period due to timber harvesting.

Factors Contributing to the Decline of Wetlands

In general, factors affecting wetlands can be divided into two broad categories: natural and human-related. Natural changes may be divided into two basic classes:

1) **Natural succession**--the process by which habitat changes from one type to another, normally a slow progression. One wetland type (such as marsh) may evolve to another (such as forested wetlands), however, wetlands may evolve into upland types, thereby, causing a loss of wetlands.

2) **Erosion/subsidence**--may be natural or human-related. In either case, the eventual result will be characterized by retreating shorelines, which ultimately means loss of wetlands. The second category, human-related changes, may be divided in several ways. The classes discussed by Roach, et al. (1987) for coastal Alabama basically covers the various classes of change that are occurring throughout the state. These are briefly discussed below.

    1. Commercial and residential development. Changes associated include filling and/or drainage in most cases. Clearing of forested wetlands may be important in some areas.

    2. Industrial and navigation development. Both types frequently involve fill. The fill is often the result of dredged materials but may also be from disposal of processing wastes.

    3. Highway construction. Changes occur as a result of filling, drainage and dredging. Dredging impacts result from establishing the channels and spoil deposition from the channels.

    4. Agricultural development. Loss is primarily associated with clearing of forested wetlands for crops, siltation, and chemical pollution.

    5. Silviculture development. Changes occur as a result of drainage to improve timber production.

6. Oil and gas development. Several types of impacts result from construction of pipeline, boat slip access, and storage areas (tanks).

7. Recreational development. Construction of boat launches and facilities can have negative impacts if environmental concerns are not addressed.

All of the threats mentioned continue to be potential destructive forces of today and the future. Because the values of wetlands are frequently overlooked due to the short-term economic gain that comes from converting the land, the importance and protection of wetlands must be stressed.

Responsibility for Wetlands planning and protection in Alabama is fragmented between and within state and federal agencies. The addition of numerous special interests, task forces, advisory committees, and university groups combine to underscore the need for comprehensive coordinated wetlands planning effort. Including a wetland component in the SCORP is a logical first step toward this end. However, to be effective, responsibility for wetlands must be clearly defined within each agency/organization and a coordinating mechanism must be in place to ensure that the final product represents a broad consensus of the interests involved.

Freshwater wetlands have not been studied to the same extent as saline wetlands; however, we do know that they continue to be converted to uses other than the natural processes for which they are so valuable. Draining and clearing of bottomlands for agricultural purposes has been common in the past with mechanization of farming increasing agricultural pressures on wetlands.

Wetland Classification

Alabama has used different ways to classify wetlands; however, with the growing need and interest in wetland identification and protection the necessity for a more thorough classification system was needed. The U. S. Fish and Wildlife Service (USFWS), along with several prominent wetland scientist and mapping experts identified the necessary elements for a classification system that is based on the concepts of ecosystems (Sather 1976). The USFWS classification system allows for those wetlands with similar ecological habitats to be organized in a hierarchical system based on dominance of dominant plants or substrates. A new wetland classification system was developed by identifying the following four key objectives:

1. Identify ecologically similar habitat
2. Classify these units systematically to facilitate resource-management decisions
3. Identify units for inventory and mapping purposes
4. Provide uniformity in concept and terminology

The USFWS system provides standardization of wetland terminology, which is useful in determining trends and status for researchers, planners and many other entities. This system has become the national and international standard for identifying and classifying wetlands (Mader, 1991; Gopal and other 1982). The system has been tested by private and public sectors prior to being published as "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin and others 1979).

The majority of wetlands are Palustrine with the next majority being Estuarine. However, there are five **systems** representing wetlands and deepwater habitats that share the influence of similar hydrologic, geomorphologic, chemical or biological factors. Each system is then divided into **subsystems** (except the Palustrine), then further divided into **classes** that will describe the general appearance of the wetland in terms of the vegetative form, or the composition of the substrate. The class is further broken into **subclasses** to identify the dominant vegetation, such as persistent or non-persistent emergents, mosses, and lichens or broad-leaved deciduous, needle-leaved deciduous, broad-leaved evergreen, needle-leaved evergreen and dead woody plants. In the non-vegetated areas the sub-classes define the substrate and consist of bedrock, rubble, cobble-gravel, mud, sand, and organic. The next step is to determine the **dominance type**, which specifies the dominant plant or animal in the wetland. Thus, allowing the individual wetlands may be grouped according to ecologically similar units.

The final step is to use **modifiers** to describe the hydrologic, chemical; soil characteristics and the effect humans have on wetlands. Four modifiers can be applied to the classes, subclasses, and dominance types:

1. The water regime modifiers have two main groups, tidal and non-tidal, and are used to describe flooding or soil saturation. The tidal modifiers are then broken further into salt and brackish-water and freshwater. The non-tidal modifier defines the conditions where runoff, ground-water discharge, recharge, evaportranspiration, wind, and lake oscillation cause water levels to change.
2. Water Chemistry modifiers differentiate salinity and pH. The type and fluctuation of salinity within the wetland determines the plant and animal life that may be found in the wetland. The pH modifiers identify the acid, circumneutral and alkalines that may be found in the wetland.
3. Soil modifiers are identified into two categories, organic and mineral, which helps determine the plant and animal life supported in the wetland.
4. Special modifiers are those used to describe the actions of humans and certain animals on a wetland, such as, excavated, impounded, diked, partly drained, farmed, and artificial.

The following listing is an outlined explanation of the first three steps of the classification system, including a brief description of each level.

Marine—Open ocean and its associated coastline. Defined by tidal water
- Subtidal—continuously submerged areas
  - Rock Bottom
  - Unconsolidated Bottom
  - Aquatic Bed
  - Reef
- Intertidal—alternately flooded and exposed to air
  - Aquatic Bed
  - Reef
  - Rocky Shore
  - Unconsolidated Shore

Estuarine—Tidal waters of coastal rivers and embayments, salty tidal marshes, mangrove swamps, and tidal flats. Defined by tidal water levels
- Subtidal—continuously submerged areas
  - Rock Bottom
  - Unconsolidated Bottom
  - Aquatic Bed
  - Reef
- Intertidal—alternately flooded and exposed to air
  - Aquatic Bed
  - Reef
  - Rocky Shore
  - Stream Bed
  - Emergent Wetland
  - Scrub-shrub Wetland
  - Forested Wetland
  - Unconsolidated Shore

Riverine—Rivers and streams. Four subsystems that represent different reaches of a flowing freshwater system
- Tidal—water levels are subject to tidal fluctuations

Aquatic Bed
Rocky Shore
Stream Bed
Emergent Wetland
Rock Bottom
Unconsolidated Bottom
Unconsolidated Shore

Lower Perennial—permanent, slow-flowing waters that have a well developed flood plain

Aquatic Bed
Rocky Shore
Rock Bottom
Emergent Wetland
Unconsolidated Bottom
Unconsolidated Shore

Upper Perennial—permanent, fast-flowing waters with little or no flood plain

Aquatic Bed
Rocky Shore
Rock Bottom
Unconsolidated Bottom
Unconsolidated Shore

Intermittent—flowing water for only part of the year

Stream Bed

Lacustrine—Lakes, reservoirs, and large ponds. Subsystems

Limnetics (deep water habitats only defined by water depth)—the deep water zone where low water is deeper than 6.6 feet

Aquatic Bed
Rock Bottom
Unconsolidated Bottom

Littoral—the shallow water zone where wetlands extend from the lakeshore to a depth of 6.6 feet below low water or the extent of non-persistent emergent plants

Aquatic Bed
Rocky Shore
Rock Bottom
Emergent Wetland
Unconsolidated Bottom

Palustrine—Marshes, wet meadows, fens, playas, potholes, pocosins, bogs, swamps, and small shallow ponds (Wetlands Only)

No Subsystem

Aquatic Bed
Unconsolidated Shore
Rock Bottom
Unconsolidated Bottom
Moss-lichen Wetland
Scrub-shrub Wetland
Emergent Wetland

The following table gives a brief description of the classes and sub-classes of wetlands and deepwater habitats as they are defined by Cowardin and others 1979, and also by the U. S. Fish and Wildlife Services Classification System.

Table 6-1 Classes and Subclasses of Wetlands and deepwater habitats

Classes	*Description*	*Sub-classes*
Vegetative		
Aquatic Bed	Generally permanently flooded areas that are vegetated by plants growing principally on or below the water surface	Algal; aquatic; rooted vascular; floating vascule
Emergent Wetland	Dominated by erect, rooted, herbaceous hydrophytes	Persistent; nonpersistent
Forested Wetland	Dominated by woody vegetation less than 20 feet tall	Deciduous; evergreen; dead wood plants
Moss-lichen Wetland	Dominated by mosses or lichens where other plants have less than 30 percent coverage	Moss; lichen
Shrub-scrub Wetland	Dominated by woody vegetation less than 20 feet tall	Deciduous; evergreen; dead wood plants
Permanently and Periodically Flooded		
Reef	Elevations above the surrounding substrate and interference with normal wave flow; primarily subtidal	Coral; mollusk; worm
Non-Vegetative and Permanently Flooded		
Rock bottom	Generally permanently flooded areas with bottom substrates consisting of at least 75% stones and boulders and less than 30% vegetative cover	Bedrock; rubble
Unconsolidated bottom	Generally permanently flooded areas with bottom substrates of at least 25% particles smaller than stones and less than 30% vegetative cover	Cobble-gravel; sand; mud; organic
Periodically Flooded		
Rocky shore	Characterized bedrock stones or boulders with areal coverage of 75% or more and less than 3)% vegetation coverage	Bedrock; rubble
Streambed	Channel whose bottom is completely de-watered at low water periods	Bedrock; rubble; cobble-gravel; sand; mud; organic; vegetated
Unconsolidated shore	Unconsolidated substrates with less than 75% coverage by stones, boulders, and bedrock; and less than 30% native vegetative cover	Cobble-gravel; sand; mud; organic; vegetated

Existing Protection Mechanisms

The existing protection mechanisms for wetlands are predominantly federal regulations and federal protection programs. Some mechanisms include acquisition, planning, mitigation, disincentives for conversion of wetlands to other land uses, technical assistance, education, and research. There are five major Federal agencies that have the majority of the responsibility to protect wetlands; U.S. Army Corps of Engineers (ACOE), U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), and the Department of Agriculture-Natural Resources Conservation Service (NRCS).

National Perspective President George H. Bush instated a federal policy goal of preserving the remaining wetlands, referred to as the ***No Net Loss Policy***. In 1993 the Clinton Administration, proposed a comprehensive package of improvements to the federal wetlands program to reflect a broad-based consensus among federal agencies entitled *Protecting America's Wetlands: A Fair, Flexible, and Effective Approach*. This comprehensive package contained principles for federal wetland policy. From these principles a number of initiatives were developed with the intent to significantly improve federal wetland policy, while maintaining protection of this vital natural resource.

Mitigation can be the key to successfully achieve the No Net Loss Policy; however, better documentation and monitoring is needed. Mitigation is a term that has evolved from the wetland regulatory agencies and wetland legislation. The term as used in regards to wetlands refers to the requirement to restore, replace, reconstruct, rebuild, establish, create, compensate, or reimburse for wetlands that would be adversely affected by human activity. The Council on Environmental Quality has defined mitigation to include:

a) Avoidance of the impacts altogether by not taking a certain action or part of an action;

b) Minimizing impacts by:

(1) Limiting the degree or magnitude of the action and its implementation;

(2) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; or

(3) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

c) Compensating for the impact by replacing or providing substitute resources or environments

Mitigation Banking can have several advantages over individual mitigation projects. According to the Alabama Coastal Counties Wetland Conservation Plan, wetland mitigation banking is the creation, restoration, enhancement, or under certain circumstances the increased protection of an area of functioning wetland to offset anticipated wetland impacts within the same ecoregion. This concept originated in response to the initiation of wetland regulatory programs, and was intended to expedite the regulatory approval process compensatory for wetland impacts. As wetland regulations were originally implemented, developers and governmental agencies with regular construction needs, such as departments of transportation, faced recurring and unpredictable time delays and costs in obtaining permitting approval for projects that involved wetland impacts. They sought a means of advance planning that would make the permitting process more reliable and would minimize costs. From this need, the concept of mitigation banking emerged. While the typical wetland bank involves creation of wetlands from upland area, banking has been expanded to include other compensatory activities. These include restoration or enhancement of degraded wetland and, in rare cases, providing more stringent protection for wetland or wetland/upland habitat associations that are otherwise threatened by human activities not subject to regulatory control.

Mitigation banking is different from the normal wetland permitting process in two key aspects.

1. It attempts to construct mitigation areas, or bank wetlands, far enough in advance of anticipated impacts in the area to attain fully functional bank wetlands by the time impacts are contemplated.
2. Banks are typically large in area to provide this trading service for numerous contemplated impacts, as opposed to the typical impact-by-impact process associated with conventional wetland permitting.

Alabama Perspective Alabama has historically relied heavily upon Federal regulations for wetland protection. Three of the most prominent examples include:

1. The Coastal Zone Management Act of 1972

2. Section 10 of the Rivers and Harbors Act of 1899--Under Section 10, any development that effects navigation on the state's waters must be "permitted" if the waters are classified as navigable by the ACOE.
3. Section 404 of the Clean Water Act as administered by the ACOE. Section 404 applies to all waters in the state having a flow of at least 5 cubic feet per second. In 1977, this act was amended by the Clean Water Act. Both are usually considered to be the "Clean Water Act." Section 404 of the act has the greatest affect on Alabama's wetlands. It regulates the discharge of dredged or fill material into waters of the United States and their adjacent wetlands. However, Section 404 is not a comprehensive wetlands protection program. It does not, regulate the drainage of wetlands or the pumping of groundwater from them because these activities do not involve dredged or fill material.

In 1991, Governor Hunt issued executive order 44, which created a Division of Water Resources within the Alabama Department of Economic and Community Affairs, which later became the Office of Water Resources (OWR) through legislative action in 1993. The new division was charged with the responsibility of planning policies to protect the State's water resources. OWR initiated a three-year study that was completed in 1995 that would address protection of wetlands and other water resources in the state.

The Alabama Department of Environmental Management manages Alabama's coastal zone through its regulatory authority under the Alabama Coastal Zone Management Act and through its authority to issue 401 water quality certification. ADEM regulates dredge and fill activities in wetlands that are not in the coastal zone solely through the State's authority to issue section 401 water quality certification under the Clean Water Act and through the Nonpoint Source Discharge Management Program. Wetland waters are considered to be waters of the State in the Alabama Water Pollution Control Act but are not defined or protected by the Act for their inherent value (ADEM, 1992).

In 1992 Amendment 543 was passed, which created the state operated land trust program in the state, the Forever Wild Program. The purpose of the Forever Wild Land Trust was to purchase and manage unique lands within Alabama, thus the unique and beneficial ecological systems of wetlands. In the ten short years of the Forever Wild Program, Seven land acquisition grants have been awarded for about $7.6 million. These acquisitions have been very successful in protecting the wetlands of the state, such as Mobile-Tensaw Delta, Grand Bay Savannah, the Sipsey River Swamp, Coldwater Mountain, as well as affecting river systems such as the Tennessee, Alabama, Coosa, and Tallapoosa.

The Department of Conservation and Natural Resources has developed the Alabama Coastal Counties Wetland Conservation Plan in an effort to improve the planning and management of the wetlands of Alabama. DCNR administers the Forever Wild program, which has the objective of acquiring land for protection, recreation, education, and scientific research.

Private Interest Perspective Private organizations have been very important advocates for wetland conservation and restoration within the state. Some of these organizations include The Nature Conservancy, the Coastal Land Trust, the Sierra Club, National Audubon Society, Alabama Wildlife Federation, Ducks Unlimited, and the Cahaba River Society.

The following table represents Federal programs that have significant effects on wetlands in the United States. The table is broken into three categories, (1) Regulations discouraging or preventing wetland conversion, (2) Acquisitions discouraging or preventing wetland conversion, and (3) Other policies and programs preventing or discouraging wetland conversion.

Table 6-2 Discouraging or Preventing Wetland Conversion --Regulations

Table provided by National Water Summary on Wetland Resources, USGS

DISCOURAGING OR PREVENTING WETLAND CONVERSION--Regulations

Program or Act	**Implementing agency**	*Effect of program*
Comprehensive Environmental Response Compensation and Liability Act (Superfund) (P.L. 96-510) (1980)	AFA	Establishes liability of the U.S. Government for damages to natural resources over which the U.S. has sovereign rights. Requires the President to designate Federal officials to act as trustees for natural resources, and to conduct natural resource damage assessments.
Coastal Barriers Resources Act (P.L. 96-348) (1982)	NOAA	Designates various undeveloped coastal barrier islands for inclusion in the Coastal Barrier Resources System. Designated areas are ineligible for Federal financial assistance that may aid development.
Coastal Zone Management Act (P.L. 92-583) (1972)	NOAA	Provides Federal funding for wetlands programs in most coastal States, including the preparation of coastal zone management plans.
Estuary Protection Act	DOI	Authorized the study and inventory of estuaries, and the Great Lakes, and provided for management of designated estuaries between DOI and the States.
Federal Water Pollution Control (P.L. 92-500) (Clean Water Act) Section 404 (1972)	Corps, EPA, FWS, NMFS	Regulates many activities that involve the disposal of dredged and fill materials in waters of the United States, including many wetlands.
National Flood Insurance Program	FEMA	Encourages development in flood plains, which contain wetlands, by providing low-cost Federal Insurance.
Federal Water Project Recreation Act (P.L. 89-72) (1965)	DOI, Corps	Recreation and fish and wildlife enhancement must be considered by Federal water projects. Authorizes Federal funds for acquiring land for waterfowl refuges.
Fish and Wildlife Coordination Act of 1956	DOI	Authorizes the development and distribution of fish and wildlife information and the development of policies and procedures relating to fish and wildlife.
Migratory Bird Conservation Act (45 Stat. 1222) (1929)	FWS	Established a commission to approve the acquisition of migratory bird habitat.
National Wildlife Refuge Acts (numerous acts)	FWS	Numerous statutes establish refuges, many of which contain significant wetland acreage.
National Environmental Policy Act of 1969 (P.L. 91-190)	AFA	Requires the preparation of an environmental impact statement of all major Federal actions significantly affecting the environment.

Ramsar Convention (Treaty), adopted 1973, enforced from 1975	FWS	Convention maintains a list of wetlands of international importance and encourages the wise use of wetlands.
Rivers and Harbors Act of 1938 (52 Stat. 802)	Corps	Provides that "due regard" be given to wildlife conservation in planning Federal water projects.
Rivers and Harbors Appropriation Act of 1938 (30 Stat. 1151)	Corps	Prohibits the unauthorized obstruction or alteration of navigable waters.
Watershed Protection and Flood Prevention Act (68 Stat. 666) (1954)	FWS, NRCS	Authorizes the FWS to investigate wildlife conservation on NRCS small watershed projects.
Wild and Scenic Rivers Act, (P.L. 90-542) (1968)	DOI, USDA	Protects designated river segments from damming and other alterations without a permit.
Wilderness Act of 1964 (78 Stat. 890)	DOI, USDA	Requires a review of Federal lands for inclusion in the National Wilderness Preservation System.

Table 6-3 Discouraging or Preventing Wetland Conversion--Acquisitions

DISCOURAGING OR PREVENTING WETLAND CONVERSION-- Acquisitions		
Program or Act	**Implementing agency**	**Effect of program**
Coastal Wetland Planning, Protection and Restoration Act (P.L. 101-646) (1990)	Corps, FWS, EPA, NMFS	Provides for interagency wetlands restoration and conservation planning and acquisition in Louisiana, other coastal States, and the Trust Territories.
Emergency Wetlands Resources Act of 1986 (P.L. 99-645)	FWS	Pays debts incurred by FWS for wetlands acquisition, and provides additional revenue sources.
Federal Aid in Wildlife Restoration Act (1937) (Ch. 899, 50 Stat. 917)	FWS	Provides grants to States for acquiring, restoring, and maintaining wildlife areas
Fish and Wildlife Conservation Act (P.L. 96-366) (1980)>	FWS	Identifies land and water in the Western Hemisphere critical for migratory nongame birds.
Land and Water Conservation Fund Act (1964) (P.L. 88-578)	FWS, NPS	Acquires wildlife areas.
Lea Act (62 Stat. 238) (1948)	FWS	Authorizes the acquiring and developing of various waterfowl management areas in California.
Migratory Bird Hunting and Conservation Stamps (1934) (Ch. 71, 48 Stat. 452)	FWS	Acquires wetland easements using revenues form fees paid by hunters for duck stamps.
North American Waterfowl Management Plan (1986)	FWS, CWS	Establishes a plan for managing waterfowl resources by various methods, such as acquiring wetlands.
North American Wetlands Conservation Act (1989) (P.L. 101-233)	DOT	Authorizes funding for wetland mitigation banks for State departments of transportation.
Transfer of Certain Real Property for Wildlife Conservation Purposes Act (62 Stat. 240) (1948)	GSA, DOI	Allows the GSA to transfer property to DOI, or States, for wildlife conservation.
U.S. Tax Code Tax Reform Act of 1986 (P.L. 99-514)	IRS	Provides deductions for donors of wetlands and to some nonprofit organizations.
Water Bank Act (1970) (P.L. 91-559)	ASCS	Leases wetlands and adjacent uplands from farmers for waterfowl habitat for 10-year periods.
Wetlands Loan Act (1961) (P.L. 87-383)	FWS	Provides interest-free loans for wetland acquisition and easements.

Table 6-4 Discouraging or Preventing Wetland Conversion-Other Policies and Programs

DISCOURAGING OR PREVENTING WETLAND CONVERSION-- Other Policies and Programs		
Program or Act	**Implementing agency**	**Effect of program**
Endangered Species Act of 1973 (P.L. 93-205)	FWS	Provides for the designation and protection of wildlife, fish, and plant species that are in danger of extinction.
Executive Order 11990, Protection of Wetlands (1977)	AFA	Requires Federal agencies to minimize impacts of Federal activities on wetlands.
Executive Order 11988, Protection of Floodplains (1977)	FWS, AFA	Requires Federal agencies to minimize impacts of Federal activities on flood plains.
Executive Order 12580, Superfund Implementation (1987)	DOI	Directs DOI to develop rules for assessing damages under CERCLA (Comprehensive Environmental Response Compensation and Liabilities Act) as a natural resources trustee.
Federal Noxious Weed Act (P.L. 93-629) (1975)	DOI, USDA, DOE, DOD	Authorizes controlling the spread of noxious weeds on Federal lands.
Federal Power Act (41 Stat. 1063) (1920)	FERC	FERC will cooperate with other Federal agencies in assessing proposed power projects, such as dams. FERC must consider protection of fish and wildlife resources.
Fish and Wildlife Coordination Act (1965) (P.L. 89-72)	FWS	Requires Federal agencies to consult with FWS before issuing permits for most water-resource projects.
Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624)	NRCS	Wetland Reserve Program purchases perpetual non-development easements on farmed wetlands. Subsidizes restoration of croplands to wetlands.
Food Security Act of 1985 (Swampbuster) (P.L. 99-198)	ASCS, FWS	"Swampbuster" program suspends agricultural subsidies for farmers who convert wetlands to agriculture.
	FmHA	Conservation Easements program allows FmHA to eliminate some farm debts in exchange for long-term easements that protect wetlands and other areas.
National Wildlife Refuge System Administration Act of 1966 (P.L. 89-669)	DOI	Provides the guidelines for managing National Wildlife Refuges.
Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (P.L. 101-646).	FWS, USCG, EPA, Corps, NOAA	Created a Federal program to prevent and control the spread of species that are aquatic nuisances.
Oil Pollution Act of 1990 (P.L. 101-380)	DOE, DOI, NOAA	Enhanced the response to oil spills and required natural resource damage assessments.

Tax Deductions for Conservation Easements (Section 6 of P.L. 96-541)	IRS	Allows taxpayers to take a deduction for a qualified real property interest contributed to a conservation organization for conservation purposes.
U.S. Tax Code Reform Act of 1986 (P.L. 99-514)	IRS	Eliminates incentives for clearing land. Deductible conservation expenditures must be consistent with wetlands protection. Capital gains on converted wetlands treated as income.
Water Resources Development Act of 1976, 1986, 1988, 1990, (P.L.'s 94-587, 99-662, 100-676, 101-640)	ACOE	States that future mitigation plans for Federal water projects should include "in kind" mitigation for bottom-land hardwood forests.

[Abbreviations: AFA, All Federal Agencies; ASCS, Agricultural Stabilization and Conservation Service; BLM, Bureau of Land Management; Corps, U.S. Army Corps of Engineers; CWS, Canadian Wildlife Service; DOD, Department of Defense; DOE, Department of Energy; DOI, Department of the Interior; DOT, Department of Transportation; EPA, U.S. Environmental Protection Agency; FEMA, Federal Emergency Management Agency; FERC, Federal Energy Regulatory Commission; FmHA, Farmer's Home Administration; FWS, U.S. Fish and Wildlife Service; GSA, General Services Administration; IRS, Internal Revenue Service; USCG, U.S. Coast Guard; USDA, U.S. Department of Agriculture; USFS, U.S. Forest Service]

Protection Strategies for Future Consideration

There are many things that can be, should be, and are attempting to be done to protect the wetlands of Alabama; not enough emphasis is being placed on certain issues. Through the Alabama Coastal Counties Wetland Conservation Working group, the following list of things must be done to effectively protect Alabama wetlands:

1. Recognized by legislation as a valuable resource
2. A protocol developed to study and update the status and trends of wetlands
3. A Wetlands management Program needs to be established
4. Authority to manage the wetlands in Alabama needs strengthening
5. Certain wetlands need to be managed through regulation
6. Non-regulatory approaches for conservation needs to be considered
7. Current mitigation efforts need to be monitored and documented
8. Mitigation Banking Guidelines need to be reviewed and banks need to be established by watershed.
9. Local governments need to take an active role in the conservation of wetlands through zoning and environmental protection ordinances.

Ecologically Significant Sites

The Coastal Zone Management (CZM) program provides protection to wetlands lying below the 10-foot contour line in coastal Alabama. The U.S. Fish and Wildlife Service concluded in 1987 that such wetlands are adequately protected under CZM authority. However, the estimated 28 percent or 46,509 acres of coastal wetland lying above the 10-foot contour are inadequately protected.

The Coastal areas represent some of the most significant ecosystems accounting for 75 % of the total U.S. commercial landings of fish and shellfish and an even larger proportion of recreational fish and shellfish, according to a 1993 report from the Council on Environmental Quality. As the human population increases, the impact that humans have on these ecosystems will also increase. Baldwin County was the second-fastest growing county in Alabama, growing from 98,000 to 136,000 people. Mobile County has not grown as fast but is spreading westward. Much has been done to reduce the impacts the coastal wetlands of Alabama are feeling from this rapid growth.

There is also a general misconception that size is directly reflective of the value of a wetland. This is not the case, just because an area tends to dry during the summer it still has a significant impact on the ecosystem. Therefore, another area that will be considered significant will be those small isolated wetlands that are no longer covered under federal regulations (Bailey 1999). The isolated wetlands provide not only ecological benefits for plants and animals but also help with the replenishment of the groundwater tables.

Accomplishments 1986-2002

During the five-year period beginning in 1986, the U. S. Army Corps of Engineers (ACOE) has acquired approximately 40,000 acres of bottomland hardwoods along the Tennessee-Tombigbee Waterway and in the Mobile Delta. The acquisitions, which included Gravine Island, noted above, was part of an 88,000-acre mitigation effort in Alabama and Mississippi associated with the waterway development. An additional 16,000 acres was acquired in Alabama by 1995 under this authorization. The properties, once acquired, are transferred to the Alabama Department of Conservation and Natural Resources (DCNR) for management. DCNR coordinates with the U.S. Fish and Wildlife Service and the ACOE in developing its wetland management plans.

The U. S. Fish and Wildlife Service received congressional appropriations totaling $1.5 million for the acquisition Salt Marsh Wetlands in Baldwin County. Approximately 50% of the Grand Bay Savannah will be acquired along with a portion of the wetlands at Little Point Clear. Both of these sites have been identified as state wetland protection priorities since 1978.

In December 1996, the Lands Division received a 40-acre tract of coastal wetlands in Mobile County (Norman H. Foster Sr. Wetland Conservation Tract), from the Natural Heritage Section.

Through a $250,000 Tennessee Valley Authority (TVA) grant, the Alabama Waterfowl Association purchased80 acres of critical wetlands at Mud Creek in Jackson County in 1999. , and plans to restore.

During 2000 and 2001 the Ducks Unlimited partnered with several State, Federal, and other private organizations to help preserve 17,000+ acres through their Matching Aid to Restore Habitat (M.A.R.S.H) projects in Alabama.

Another significant partnership occurred in 2002 when The Nature Conservancy (TNC) contributed one million dollars toward the purchase of 47,000 acres by the State of Alabama. In addition to assisting Forever Wild in this purchase, TNC wrote a $940,000 National Wetlands Grant specifically for land acquisition in the Mobile-Tensaw Delta. Other partners included Ducks Unlimited, who donated $250,000 to the project.

In recent years the Nature Conservancy has also helped protect the following: Chitwood Barrens Preserve, Coosa Bog Preserve, Gulf Creek Canyon Preserve, Prairie Grove Glades, Keel Mountain Preserve, Bartons's Beach in Perry County, Bibb County Glades Preserve, Pratt's Ferry Preserve, Dry Creek Preserve, Pine Hills Preserve, Grand Bay Savannah, Rabbit Island, Mobile-Tensaw Delta, Weeks Bay NERR.

Goals for the Future

The wetlands within the State of Alabama are still vastly unprotected. Through education, legislation, and cooperation we can protect this valuable resource. There are many agencies from the private, state, and Federal sectors that are working toward planning and managing Alabama's wetlands. All of these entities have similar goals but are working separate collecting their own data, forming their own conclusions, etc.

Therefore, it is recommended that a cooperative wetland planning commission be established to draft a legislative initiative for the preservation of the wetlands within Alabama. This would allow for coordination of all the hard work that is being done to protect the wetlands. It is also recommended that counties and municipalities use local ordinances to protect the resources within their jurisdictions (a sample ordinance from the *Coastal Counties Wetland Conservation Plan* included at the end of this document).

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In addition, numerous sites on the Internet were accessed for information including : the Americans for our Heritage and Recreation (AHR) at www.ahrinfo.org; National Park Service at www.nps.gov; U.S. Forest Service at www.fs.fed.gov; U. S. Fish and Wildlife Service at www.fws.gov; U. S. Army Corps of Engineers at www.usace.army.mil; Alabama Department of Conservation and Natural Resources at www.dcnr.state.al.us; Alabama Department of Environmental Management at www.adem.state.al.us; Alabama Forestry Commission at www.forestry.state.al.us; Alabama Historical Commission at www.preserveala.org; among others.